This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

B 4 327 266

UNIVERSITY OF CALIFORNIA
SAN FRANCISCO MEDICAL CENTER
LIBRARY

EX LIBRIS

THE

GLASGOW MEDICAL JOURNAL.

THE

GLASGOW MEDICAL JOURNAL.

EDITED BY

JOHN LINDSAY STEVEN, M.D.,

FOR THE

Glasgow and West of Scotland Medical Association.

JULY TO DECEMBER, 1899.

VOL. LII.

UNIV OF CALIF
MEDICAL SCHOOL

GLASGOW:
ALEX. MACDOUGALL, 68 MITCHELL STREET.
LONDON: H. K. LEWIS, 136 GOWER STREET.
1899.

THE

GLASGOW MEDICAL JOURNAL.

No. I. July, 1899.

ORIGINAL ARTICLES.

DEMONSTRATION OF CASES.[1]

By D. N. KNOX, M.B., C.M.,

Surgeon, Glasgow Royal Infirmary; Professor of Clinical Surgery,
St. Mungo's College, Glasgow.

I. *Intussusception cured without operation—Two cases.*

1. Helen M'G., aged 4½ years, was admitted on 27th March, 1899, with symptoms of intussusception of a fortnight's duration. Her first symptoms were colicky pains and vomiting. Some blood and mucus had been discharged *per rectum*. When she was seen by me first with her own medical attendant, these symptoms were all present. She had besides a pinched expression; the temperature was normal; the pulse, 126 per minute, weak and thready; the tongue was brown and furred: the vomiting was constant. The abdomen was drawn in, and in the splenic region, and descending towards left side, a distinct sausage-shaped tumour could be felt. Nothing could be felt *per rectum*. An enema was returned, with no result whatever.

She was brought into Ward 21, with a view to laparotomy,

---

[1] Given at a meeting of the Glasgow Eastern Medical Society held on 19th April, 1899, in the Royal Infirmary.

22 [illegible] 9

if necessary; but after her admission her symptoms became less urgent—the pinched expression left her face, the pain was less severe, and the tumour was felt to be softening and diminishing in size. On the second day there was a motion, consisting of mucus and blood, and some shreds of tissue.

Enemata were frequently given, with rectal feeding; as little food as possible was given by the mouth, as the sickness and vomiting continued. The constipation was gradually relieved, and day by day the tumour became smaller and softer till it disappeared altogether, and the patient made a complete recovery. The temperature throughout the whole illness never rose above 99° F.; frequently it was as low as 97° F.

2. William M'R., aged 10 years, was admitted on 25th March, 1899, with obstruction of five days' duration. It began with shivering, followed by sickness and vomiting. Severe pain across umbilicus, with distension of abdomen, and general tenderness; tongue clean; pulse, 80; temperature normal.

Enemata, with belladonna fomentations, were given, and on the second day after admission the bowels yielded, and patient at once began to recover. He is now quite well.

II. *Tubercular peritonitis—Cured by laparotomy.*

The patient now before you was operated on by me more than a year ago.

She is now 6 years of age. She was admitted suffering from tubercular peritonitis of many months' duration. She was pale and emaciated to the last degree. The abdomen was greatly distended, and contained a large amount of fluid. The abdomen was opened in the middle line, below the umbilicus; the incision was about an inch and a half long. About two pints of fluid were removed simply by turning the patient round on her face and allowing it to flow out. The omentum was loosely adherent at some parts to the parietal peritoneum; these adhesions were broken down gently without causing hæmorrhage. The peritoneum was felt to be uniformly studded with tubercles. The abdomen was drained for some days, and the wound allowed to heal by second intention. The patient was sent to the Home two months after the operation. She has been seen by me several times since, and now you can see that she is perfectly cured.

Since this girl was operated on I have had other two similar cases. One of these, a child, did very well for some months, but she has come back with a slight ventral hernia and return of fluid in abdomen. [The hernia was operated on, and the abdomen drained for the second time, June, 1899; it is too soon yet to state the result.] The other was a woman, aged 33, admitted for ovarian tumour. This was removed, and the presence of tuberculous peritonitis discovered. The cavity of the peritoneum was drained, and the patient made a slow, but fairly good, recovery.

III. *Appendicitis—Appendicular abscess—Operation—Subsequent development of abscesses in abdominal wall.*

The story of this patient's illness (Mrs. F., aged 30) is that nine weeks ago she had severe pain in the right iliac fossa, lasting for seven days. She made a fair recovery from that attack, but two weeks later the symptoms set in again so severely and continuously that it was thought advisable that she should be prepared for operation.

On admission to Ward 21, there was considerable hardness and tenderness over the right lower part of the abdomen. The bowels were constipated. There was feverishness, and she had had some shiverings.

On examination, the swelling in the right iliac fossa was palpable; dulness to percussion was quite distinct; fluctuation was very ill-defined. The pulse was 120 (the rapidity of the pulse in all such cases is a diagnostic point of very great importance). The temperature was 101·2°.

An incision was made over the region of the vermiform appendix, and a quantity of very fœtid pus evacuated. The cavity was thoroughly drained, and a rubber drainage-tube inserted.

[The patient did very well for some weeks, except that the amount of discharge did not diminish so rapidly as was expected. A month after the operation another abscess formed within the abdominal wall to the left of the umbilicus. The infection had spread along the abdominal fascia. This also contained a large quantity of the same excessively fœtid, thick, greenish pus, and was drained in the same way. Some weeks later a third abscess formed, also in the abdominal wall. This was in all respects similar to the second, and was dealt with in the same way.

The patient is now (18th June) progressing satisfactorily, although there still are small quantities of pus discharging from the three abscess cavities.]

IV. *Gangrene of foot following ligature of superficial femoral artery for aneurysm of the popliteal.*

This patient was admitted to Ward 22 on 23rd February, 1899, suffering from aneurysm of the popliteal artery, which had been first noticed by him six months before. The symptoms were quite typical: A tumour about the size of a hen's egg, with distinct expansile pulsation, which ceased on compressing the artery at Poupart's ligament; occasional twinges of pain down the leg; swelling of leg below the knee at the end of the day.

On 1st March I tied the femoral artery in Scarpa's triangle. The operation was not attended with any difficulty. For some days afterwards patient complained greatly of pain in the leg, and on the fourth day two slightly blue patches appeared on the dorsum of the great toe. These patches have gradually increased, until the whole of the first and second toes, and part of the third, are, as you see them now, in a state of dry gangrene. The wound at the seat of operation healed by first intention.

[The gangrene slowly spread till it involved the greater part of the foot. On 19th May, when a distinct line of separation had formed round the ankle, amputation of the foot was performed, but the flaps in their turn became gangrenous, and, finally, on 3rd June, the leg was amputated at the lower end of the femur above the aneurysm. The wound has healed kindly, and the patient is now (18th June) very well.

A dissection of the popliteal space shows that there are two aneurysms, so closely placed that they are hardly separable. The upper is the smaller, and is of the size of a hazel-nut, and has the popliteal vein on its inner side: the lower is about the size of a walnut, and has the vein spread out over its posterior aspect, and completely occluded. The internal popliteal nerve lies on the convexity of the tumour. The contents of the sac are firm. This occlusion of the popliteal vein is doubtless the cause of the gangrene.]

V. *Necrosis of posterior surface of pubes—Small sequestra removed from the posterior urethra—Vesical calculi—Lateral lithotomy—Recovery.*

T. P., a farmer, was in my ward first in April, 1898. His story then was that he had been for the past three months suffering from pricking pain at the external urinary meatus, independently of the passing of water. On three occasions there was bloody urine. Calculi were found by the sound, and seen by the urethroscope in the prostatic urethra. These were removed at two sittings under an anæsthetic, and we have them here to show you. You observe that they are really sharp, irregular, spinous pieces of bone. Examination of the bladder with the cystoscope revealed nothing abnormal. The patient left the hospital apparently well.

He returned six months later with symptoms of stone in the bladder, and with a sinus in the abdominal wall, midway between the umbilicus and the pubes. From this sinus pus had for some weeks discharged, but for the last fortnight he had noticed urine coming from it.

On 2nd February, 1899, I did a lateral lithotomy with Andrew Buchanan's rectangular staff, and removed two calculi, each three-quarters of an inch in length, and oval in shape. These you observe are phosphatic, and the nucleus of each is a spicule of bone, identical with the pieces of bone you have already seen, which were removed from the urethra.

For some weeks urine drained from both abdominal and perineal sinuses, but it has gradually diminished in amount, and has now practically ceased. Another abscess formed on the inner side of the left thigh; this was opened and drained till it healed. No urine discharged from it.

This case, then, I believe to be one of tubercular necrosis, with separation of sequestra of the posterior aspect of the left pubes. In the first instance, the sequestra were removed as urethral calculi; in the second, as vesical calculi covered with phosphatic deposit. These sequestra have, so to speak, dropped or worked their way into the bladder. Some of them have been passed in the urinary stream, others were extracted from the urethra, while others, again, were retained for longer periods, and formed the nuclei of the vesical calculi. The two sinuses described were brought about by the inflammatory tubercular process burrowing in the connective tissues, and finding its way to the surface at these two points. In the case of the first the sinus communicated also with the bladder.

VI. *Gall-stones removed by cholecystotomy.*

The patient, Mrs. C., aged 26, was admitted to Ward 21 first in November, 1898. Her story was that for a year past she had noticed a swelling situated in the right hypochondriac region. This swelling was, or seemed to her to be, more or less movable. It caused her no discomfort, and was not increasing in size. A fortnight before admission she had an attack of acute pain over the whole abdomen, but more particularly on the right side beneath the ribs. The pain was bearable, and lasted for nearly thirty-six hours, when it became excessive. She vomited then, and thereafter got instant relief.

Patient went home for a few days, and returned in March, 1899. Then a rounded tumour, about the size of a hen's egg, was felt at the tip of the tenth rib. It was freely movable, and when grasped by the hand against the ribs gave a distinct sensation of crepitation—this sensation being, in fact, the rubbing on one another of the gall-stones within the gall-bladder. On 11th March, 1899, I opened into the gall-bladder by the usual vertical incision. There was some difficulty in removing the gall-stones, which are all of cholestearine, bile-stained, and facetted, as you see from those that I pass round now. The only satisfactory way of removing the stones was by irrigating the cavity of the gall-bladder, and so washing them out. The opening into the gall-bladder was stitched with Czerny-Lembert catgut sutures, and the gall-bladder returned within the cavity of the abdomen. The recovery was hindered by slight suppuration localised in the abdominal wall, but was ultimately a good one.

A point of interest in this case, apart from the main features of it, was that the patient was some months pregnant. In consultation with Dr. Adams, it was decided that the chances of the course of pregnancy being interrupted by a laparatomy were not great, and so it proved.

[She was sent home well on 9th May, 1899.]

CASES OF PREGNANCY ADMITTED TO THE WARD FOR DISEASES OF WOMEN.

By J. K. KELLY, M.D.,

Physician for Diseases of Women, Glasgow Royal Infirmary;
Lecturer on Gynæcology, St. Mungo's College.

CASES of pregnancy are not infrequently sent into the gynæcological ward, either because the pregnancy has not been ascertained or because some complication exists. Leaving out of consideration the cases of incomplete abortion and of extra-uterine pregnancy which are so frequently under our care, it is interesting to glance over the records of the pregnant cases with which we have had to deal. And in this review we consider only cases which have been admitted to the ward, and omit altogether the cases which are sometimes sent up to have the question of pregnancy determined by a physical examination. Such a case was recently sent in from the country to a medical colleague as suffering from albuminuria, dropsy, and some obscure abdominal swelling. The young person, who was 24 years old, had denied the possibility of pregnancy to her medical attendant, to whom the idea of pregnancy had naturally occurred, but on examination both of the mammæ and of the pelvic organs there was no doubt as to the condition.

CASE 1.—Mrs. B., æt. 27, ii-para, last child 3 years old, was sent in on 30th November, 1896, under the suspicion of having an extra-uterine pregnancy. She had menstruated last on 21st to 24th August, and the discharge was then scantier than usual. In the end of September she was suddenly seized with severe abdominal pain and free bleeding from the rectum, and there was also slight vaginal discharge. At the same time there appeared a general swelling of the abdomen (which has now disappeared), and a lump on the right side (which is still present and increasing in size). Rectal bleeding and pain in defæcation continued for about three weeks, but there was no further vaginal hæmorrhage till she was examined by her physician on 28th November, when she had a considerable discharge.

There was a history of epileptiform attacks during her second pregnancy, with swelling of feet, and ultimately general œdema, and with albuminuria. The second puerperium was disturbed by a secondary hæmorrhage and pain in the hypogastric region. She had another attack of dropsy a year ago, and pleurisy as well.

When examined in Ward 30, the report was as follows:— "Examination reveals a rounded mass chiefly occupying the right side of the hypogastrium, but extending also to the left of the middle line. Its upper border is fully two fingerbreadths below the level of the umbilicus, and is painful to pressure, the most painful part being about the level of the A.S. iliac spine. It is somewhat movable, but cannot be carried across the middle line. *Per vaginam,* cervix is somewhat thickened and follicular, lying in usual position. The tumour above described is continuous with the cervix, and presents the characters of an enlarged uterus. In the left parametrium there is some thickening and fixation, but no tumour can be felt in Douglas' pouch. Breasts are secreting."

I gave it as my opinion that, as the result of a parametritis complicating the last confinement, the fundus uteri was thrown to the right side, but that, with that exception, we had to deal with a simple uterine pregnancy. Patient was detained nineteen days in the ward, and during that time an increase in the size of the uterus was noted, and after she was sent home we heard in due time that she had a happy delivery.

Apart from the physical signs, the history in this case quite justified the suspicion of extra-uterine pregnancy, but the absence of a retro-uterine or tubo-ovarian tumour was sufficient disproof. The cause of the rectal bleeding, on the other hand, must remain doubtful. Perhaps it was in some way associated with disorder of the venous return depending on the long-standing parametritis.

CASE 2.—Mrs. B., æt. 28, ii-para, last nine years ago, since then frequent abortions, admitted 9th January, 1897.

Patient was sent in on account of menorrhagia and pain in sacral and right iliac regions.

Physical examination.—Abdomen presents normal characters. There is some pain on pressure over the region of the ascending colon. *Per vaginam*, uterus is in normal position, mobile, strongly anteflexed, painless to pressure, and slightly enlarged. Right fornix normal. In left fornix, close to uterus at isthmus and fixed there, a small firm swelling, which is the only part pressure on which causes pain. It is distinct from the ovary, which is felt to its outer side.

Patient had not menstruated for five weeks, and had morning sickness while in the ward. We accordingly dismissed her after nine days. We considered that the menorrhagia and pain, as well as the abortions from which she had previously suffered, were probably due to a left salpingitis, and we advised her to return if her troubles continued after the pregnancy was terminated.

CASE 3.—Mrs. S., æt. 38, xi-para, last two years ago, admitted 16th March, 1897.

Patient is ten weeks pregnant. For the last five weeks she has had severe vomiting, and at present can retain nothing. Vomiting also occurs apart from the taking of food. Patient is stout and flabby, but says she has lost flesh since this illness began. She has pain in the epigastrium when vomiting, and a feeling of burning behind sternum. About fifteen months ago she had a similar attack, which was cured by the induction of abortion.

Physical examination.—Skin is dusky yellow. Conjuntivæ slightly yellow. Pulse, 130, small and soft; temperature, 97·6°. Urine acid, 1023, of dark porter colour from copious bile pigment, considerable albumen. Abdomen large, liver dulness normal. *Per vaginam,* uterus enlarged, somewhat out of proportion to supposed period of pregnancy. Its walls are harder than usual, but no other abnormality is detected.

On admission, patient was put on rectal feeding, and the vomiting ceased. The amount of albumen and bile in the urine, however, continued with very little variation, and patient began to be drowsy. On 21st, a little fluid food was begun by mouth, and was at first retained, but on the 24th the vomiting returned. The pulse continued very frequent and small, and the temperature remained subnormal. On 26th, abortion was induced, but the condition was in no way improved. The lethargy increased. Vomiting returned occasionally. The urine continued dark until the day before decease on 31st March, when it became of normal colour, and contained much less albumen.

Post-mortem inspection was refused, and there must remain doubt as to the hepatic condition, but it is not unlikely that the condition resembled what was found in Case 9—an extreme fatty infiltration. The presence of normal liver dulness, as well as the absence of characteristic symptoms, probably exclude acute yellow atrophy.

Case 4.—Mrs. R., æt. 31, v-para, last fifteen months ago, was admitted 7th October, 1897, complaining of constant pain in left side, aggravated by exertion. The pain has been present since the birth of her last child. She has not menstruated for two months. For four months previous she had regular menstruation, but after her child was born, and until six months ago, she menstruated every fourteen days.

Physical examination.—A rounded mass is felt in the hypogastrium, reaching nearly halfway to umbilicus, presenting characters of pregnant uterus. *Per vaginam,* uterus is enlarged to about size of three months' pregnancy. Os patent with irregular edges.

Patient only remained two days in the ward.

Case 5.—Mrs. L., æt. 44, xi-para, the last three years ago, was admitted 11th November, 1897, complaining of a return of symptoms for which she had been curetted in November, 1896, viz., pain, leucorrhœa, uterine hæmorrhage, and feeling of uterine prolapse. For the last two months, however, she has had no hæmorrhage from the uterus, and for eight days she has vomited everything she has taken, not even a sip of sodawater being retained. The vomited matters are sometimes like blood, sometimes black or green. She has also difficulty and pain in micturition.

Physical examination shows in hypogastrium a firm mass rising 2 inches above symphysis, extending farther to right than to left side, and somewhat tender to pressure. *Per vaginam*, cervix is somewhat depressed and fixed. Right fornix is encroached upon by a rounded mass representing the lower surface of the mass felt in the abdomen, continuous with the cervix, and bulging also into Douglas' pouch. Slight lividity of vaginal mucous membrane. Mammæ secreting.

We kept her in the ward for fifteen days. By that time the sickness had quite disappeared, and patient was able to take and retain food fairly well.

In this case there had been a salpingitis a year before, and the pelvic pain, as well as the severe gastric troubles (a reflex congestion ?), were perhaps due to the dragging upon the adhesions round the tubes caused by the ascending uterus.

CASE 6.—Mrs. R., æt. 34, iv-para, admitted 25th March, 1898.

On 22nd March, patient was suddenly seized with severe pain in abdomen, especially in right side, followed by vomiting and shiverings, alternating with flushings of heat. On the following day she had a sore throat, and a cough with expectoration. She has not menstruated since 10th November, has had occasional attacks of vomiting and headache, and feels a fulness in abdomen as if a cord were tied round the waist.

Eleven years ago, just before the birth of her third child, she had an attack of inflammation in the right side. This returned two years ago, when she had to stay three months in bed.

Physical examination.—Inspiration and expiration are accompanied by moist bubbling râles in both apices. Expiration is prolonged, but there is no dulness on percussion. Abdomen is uniformly distended. Distinct tumour occupies hypogastrium up to within 1½ inch of umbilicus, tending more towards the right side than to the left. Uterine souffle heard over left border, about midway between middle line and A.S. spine. Fœtal heart sounds not heard. *Per vaginam*, cervix enlarged, soft, follicular. Both cervix and vagina give ordinary feeling of pregnancy. Uterus uniformly enlarged. Fœtal movements felt through uterine wall in anterior fornix.

Patient remained ten days in the ward, and left feeling well, as the result, probably, of the rest and careful dieting.

What was the cause of the sudden abdominal pain which occurred three days before admission?

Although the temperature was only 99·4° on admission, and was normal afterwards, it is probable that the sore throat and apical catarrh were accompanied by fever at the onset. Cases of abortion are apt to occur in fevers, pneumonia, and other conditions of general systemic disturbance, especially when associated with high temperatures. And in this case also the pain may have indicated the uterine response to the general disturbance.

CASE 7.—Mrs. S., æt. 21, ii-para, admitted 4th October, 1898. Patient came in on account of abdominal pain, worst on the left side, which had troubled her since the birth of her last child, fourteen months before. The pain is worst during menstruation, and at that time she has always to take to bed for two days. Menstruation is irregular; sometimes she misses a month, and now it is two months since she menstruated. She has been subject to fainting attacks for a number of years. Of late she has lost flesh, and has rigors and sweats.

Physical examination.—In abdomen there is some tenderness in left iliac region, where scybala can be felt in the sigmoid. Above the symphysis and to the left of the middle line is felt a rounded mass resembling the fundus uteri, not tender to pressure. *Per vaginam,* uterus is enlarged, thrown slightly to left of middle line, strongly anteverted. Cervix follicular, not much softened. No vaginal lividity. Mammæ secreting.

The pain in this case was probably due to pelvic adhesions, set up after the last confinement, when she was delivered of a still-born child, although no abnormality of that kind was felt on examination. The deviation of the uterus to the left, instead of the usual deviation to the right, was perhaps an indication that adhesions existed.

Patient remained in ward only two days.

CASE 8.—Mrs. M'A., æt. 32, vi-para, admitted 18th October, 1898, complaining of prolapse of two years' standing. Is still nursing her last child, born two years ago. Up to three weeks ago she was always able to push up the prolapsed uterus herself, but at that time she had to call in a physician to replace it. She has only menstruated once since her last child was born, and that was about four months ago. For the last month or so she has had slight sickness, which made her suppose she might be pregnant.

On examination we found the uterus enlarged, cervix softened, breasts secreting, &c., and after inserting an elastic ring pessary, we sent the patient home on 20th October, to return after her child was born for treatment of the prolapse.

CASE 9.—Mrs. C., æt. 30, ii-para, was admitted on 7th January, 1899, complaining of constant vomiting for the last six weeks. For the last two weeks she has been confined to bed. Seven years ago she had a similar attack when she was three months pregnant, and after it had continued for three months it was terminated by induction of labour. Except for that and an attack of vomiting, which lasted a month about a year ago, patient has been quite healthy. At present she is about three months pregnant, the last menstruation having occurred at the beginning of October.

Physical examination.—Patient is jaundiced. Urine contains some albumen, and is as dark as porter from bile pigment. Abdomen large, flaccid, presenting tenderness in hepatic region and in hypogastrium. *Per vaginam*, uterus presents normal pregnant characters; fornices tender to pressure; cervix follicular.

As in the former case (Case 3), we delayed emptying the uterus, and attempted to combat the sickness by purely rectal feeding, by potassium bromide in large doses, by counter-irritation over abdomen, and by light packing of vagina.

The patient, however, grew rapidly worse. Vomiting, retching, and hiccough continued. Urine remained dark and scanty. The nutrient enemata were frequently returned. Mental functions were dulled. There were occasional twitchings in face and hands. On 13th January the uterus was emptied of its contents. The bleeding during the operation was very slight. No improvement followed. On 14th January, subdermic infusions of normal saline solution were begun, and continued twice daily in addition to the nutrient enemata, but without more than transient effect. Patient died early on the morning of 20th January, the pulse having been uncountable for more than twenty-four hours, the respirations numbering sometimes over 60 per minute, and the temperature running up from 99·8° at 8 P.M. on 18th to 105·4° at 12 P.M. on 19th, half an hour before death.

At the autopsy the only apparent pathological change of importance was the liver, "much enlarged and showing extreme fatty infiltration." The summary of the *post-mortem* report runs: "Post-partum uterus, flabby heart, extreme fatty change in liver, congestion of spleen and kidneys, great subcutaneous fatty deposit." From these appearances, Dr. Workman judged that the patient must have been addicted to drink, and on inquiry we ascertained that she had been very intemperate in her habits.

CASE 10.—Mrs. C., æt. 36, vii-para, last three and a half years ago, was admitted on 29th February, 1899, complaining of frontal headache and want of memory. These symptoms have been present since a flooding in December last, which came on at a menstrual period and continued for five weeks. Since this ceased patient has not menstruated. Her symptoms she attributes to want of proper rest and food. She gives a history of alcoholic habits.

Physical examination.—Breasts are not enlarged nor secreting. Abdomen presents normal characters, but in hypogastrium, reaching nearly halfway to umbilicus, is a feeling of resistance to palpation, as if the uterus were enlarged. *Per vaginam*, cervix is high in vagina, and more posteriorly than usual. Uterus is enlarged and somewhat softened, pressing down anterior vaginal wall, suggesting a pregnancy of rather over three months.

Patient remained only two days in ward.

CASE 11.—Mrs. M'D., æt. 46, viii-para, last five years ago, admitted 30th March, 1899. Complains of pain in abdomen, especially in left iliac region. The pain has been present since a fall on the abdomen in December last, when she was menstruating. After the fall she had several rigors, the menstruation ceased, and has not since returned. She is troubled with sleeplessness. For the last week has had headache and a tendency to faintness. The breasts are painful, and the legs swell after exertion.

Physical examination.—Mammary glands are secreting. Abdomen is rather protuberant up to level of umbilicus. Over this portion it is tender to palpation, especially over the left side, and gives a feeling as if the lower abdomen contained a tumour slightly movable from side to side. *Per vaginam*, vagina is long, cervix high up with thickened soft lips, left and posterior fornices unduly full and tender. Uterus enlarged, forming the tumour felt in hypogastrium. Uterine souffle detected, but neither fœtal movements nor heart sounds.

Patient remained in ward nineteen days, and before she left both the pain and sleeplessness had disappeared, probably owing to the rest in bed and careful dieting.

CASE 12.—Mrs. A., æt. 34, iii-para, last two years ago, was admitted on 7th April, 1899, complaining of severe pain in lower abdomen, which came on suddenly in the end of January and has confined her to bed ever since. She has had occasional rigors and sweatings, and has been treated with hot fomentations and poultices. It was supposed that the pain was of a rheumatic nature.

After her last confinement two years ago, which was a very severe one, embryotomy having been performed, she menstruated every fortnight, and during the flow the abdominal pain was increased. Her last menstruation occurred about two weeks before the new year. Since the attack of pain in January she has had frequent fainting turns, but no vaginal hæmorrhage. Headaches and morning sickness have troubled her.

Physical examination.—Mammary glands are not enlarged, but areolæ are dark, and secretion can be expressed from the nipples. There is a tumour in hypogastrium, reaching to level of umbilicus and bulging forward the abdominal wall. It can be displaced to either side, but takes central position when left to itself. It is painless on palpation. On pressing the hand inward above symphysis, the tumour can be raised till its upper border is fully an inch above umbilicus. No fœtal sounds or movements or contractions in wall of tumour can be detected. *Per vaginam*, cervix is enlarged and softened, presenting follicular elevations. Mass felt *per abdomen* is enlarged pregnant uterus. There is considerable fulness in the bases of both broad ligaments. Vulvar and vaginal mucous membrane only slightly livid.

The patient remained in ward for eight days, and left greatly relieved by the mere rest and careful regimen.

The source of the pain in this case, which had evidently been very severe, must remain doubtful, but its origin is most probably to be sought for in pelvic adhesions resulting from the last confinement, which was terminated by embryotomy. The menorrhagia which followed the puerperium indicated some change in the pelvic contents of such a kind as to determine a hyperæmia of the uterine mucous membrane. One of the most frequent of such changes is a salpingitis, and salpingitis is also the most frequent source of adhesive pelvic peritonitis.

WILLIAM HUNTER, ANATOMIST: A LECTURE WITH DEMONSTRATION OF PREPARATIONS FROM THE OBSTETRICAL SERIES OF THE HUNTERIAN MUSEUM.[1]

BY JOHN H. TEACHER, M.A., M.B., C.M.,

Underkeeper in the Hunterian Museum, and Assistant in the Physiological Department, Glasgow University.

THE billet for this afternoon's proceedings designates the subject of the lecture "William Hunter, Anatomist." When I was asked to give this lecture and demonstration to the Society, the idea was that it should deal with William Hunter as an obstetrician; but it gives an opportunity, which I trust you will excuse me for regarding as too good to be omitted, of entering a protest against the commonly accepted view of what William Hunter was, and why he is entitled to a prominent place in the history of medicine.

To quote the words of the late Dr. Matthews Duncan,[2] who was a most enthusiastic admirer of "the accurate William Hunter," "he is known as a fashionable practitioner and a great author in obstetrics," yet he "did not give his great and sustained powers to midwifery, but to anatomy. His abilities, his zeal, his great fortune were devoted to this. To use his own phrase, he made a great figure in anatomy. We know from his own mouth that it was as an anatomist that he claimed eminence and expected fame; and although his reputation has latterly become too exclusively obstetrical, it has not even in this respect been too highly exalted. Yet it is necessary, with a view to justice, to point out that his obstetrical fame is chiefly anatomical, and that his greatest claim on our admiration and gratitude arises from his anatomical work and influence." If we judge William Hunter from his writings we might allow that the common estimate of him is the correct one, for the great work which has conferred immortality on his name (as Waldeyer[3] describes it, "dieses fur alle zeiten werthwolles werk"), *The Anatomy of the Human Gravid Uterus*, completely overshadows all his other works; yet not altogether deservedly, for there are many contributions, especially to anatomy and physiology, but also to surgery and pathology, in his lesser works which are worthy of attention. Unfortunately, he never collected his scattered papers from the rather inaccessible proceedings and transactions in which they appeared, to issue them as a separate volume (like his brother John's *Observations on the Animal Economy*) which would have found a place in every library of importance.

---

[1] Read at a meeting of the Glasgow Obstetrical and Gynæcoloical Society held on 26th April, 1899, in the University.

[2] Harveian Oration, *Edinburgh Medical Journal*, No. cclii, June, 1876, p. 1070.

[3] Article, "William Hunter," in *Biographische Lexikon der Aertzte*, Gurlt and Hirsch, Vienna and Leipzig, 1886. He also mentions that a number of W. Hunter's papers from *Medical Observations* and *Philosophical Transactions* were translated into German and published in 1784-85 in two volumes, 8vo, by C. G. Kuhn, at Leipzig. I have not seen these volumes.

In the field of obstetric practice he shares with Smellie the credit of rescuing midwifery in England from the clutches of ignorant and superstitious midwives, placing it in the hands of properly qualified educated medical practitioners, and giving it a sound basis of correct anatomy and physiology. As he said to his students in 1774,[1] "We are greatly improved in midwifery within these twenty years past. What is this great improvement? Why, I am proud to have a share in it; it is the bringing it back to nature. Everybody knows, who lives in this town, what difference there is in having children born dead, and what is the reason. It is only within these last twenty years that women have had men-midwives almost universally. Formerly they were only retained in the house and called for in difficult cases. Thus it was with the Chamberlens, my master Douglas, and others. What was the consequence? All cases were difficult and so bad before they were called in that everybody was much frightened. On these accounts they did not know what nature could do, and therefore were obliged to have immediate recourse to art, and whenever they had opened a child's head to deliver a woman it was thought they had done great feats. But if they had understood midwifery, and what great things nature was capable of effecting, they would seldom have had occasion to proceed in that manner."

But besides laying "the stable foundations" of the science of midwifery, and teaching his contemporaries how to apply that science, he has still wider claims to be regarded as a benefactor of the human race. He was the founder, the organiser, in every way the leader, of the school of anatomy of which Sir Charles Bell wrote in 1812,[2] the school "founded by the Hunters has made all the anatomists of the present day at home and abroad." At the time he came to London the condition of medicine and medical education in Britain was miserably deficient. This, he saw, was very largely owing to the backward condition of what may be called the preliminary scientific training—the anatomy and physiology and pathology which are "the only solid foundation for medicine"; to the "difficulties, dangers, and expenses that must be incurred in procuring dead bodies and in providing proper places for dissection, and to the secrecy with which the business must be conducted."[1] Also, that anatomy was taught "only by young men as an introduction to business, the name of lecturer, in newspapers and in private conversation, never failing to give a man some degree of credit. But such young teachers will generally be very indifferently qualified when they begin; and when they have acquired some ability from experience, that is, when they are just become fit for teaching, they will generally leave off. They will always find their labour better rewarded (in the vulgar sense of reward) by following the practice of physic or surgery than by reading lectures. So it has been, in fact; and thence, though we have had many professors or teachers in this great town, we have not had one Winslow, or Morgagni, or Albinus; nor can it be expected that a Briton should be able to do in a few years what is done by the labour of a long life in other countries; especially, too, when we consider that there is no provision made by our government for supplying him with subjects, and that in other countries this article is amply provided for."

---

[1] *Midwifery Lectures*, MS., Royal College of Surgeons of England, 42, c. 31, p. 166.

[2] *Letters of Sir C. Bell*, p. 197, 8vo, London, 1870.

To the schools of the Continent, then (like the Monros of Edinburgh and Smellie) did William Hunter proceed, after first making himself as competent an anatomist as was possible at home. He attended the whole course of lectures of at least one of the leading anatomists of the day. He studied the methods of teaching, of investigation, and of making preparations, and on his return organised, "not only without public encouragement, but in the face of the greatest difficulties and the most chilling and discouraging inattention,"[2] courses of anatomy which equalled, and indeed ultimately surpassed, those of the foreign masters. According to Matthews Duncan, "he may be regarded in many respects as the founder of the London School of Medicine as a good place of education." There were teachers of anatomy in London before his day, but he was the first to give a complete systematic illustrated course, and Simmons remarks that "it deserves to be mentioned, as an additional mark of his prudence, that he did not precipitately engage in this attempt, but spent several years in acquiring such a degree of knowledge and such a collection of preparations as might ensure him success."[1] These anatomical preparations were the nucleus of his museum. The great value that the museum, the expenses of which were paid as he went along out of his professional income,[2] ultimately attained, proves that he combined with his prudence a full share of business capacity.

---

[1] *Introductory Lectures of Dr. William Hunter*, pp. 118 and 119; *Petition to the King*, 4to, London, 1784.

[2] Thomson's *Life of Cullen.*

He also possessed the talent of infusing his own ardour into his pupils. The list of the most remarkable of the men whom as his assistants he trained to anatomy, speaks for itself. The first, John Hunter, everybody knows about. The published works of William Hunter contain many references to the assistance he received from his younger brother, and one cannot read the reports of his lectures without being struck with the evident pride he took in John's achievements, and the pleasure he felt in acknowledging his indebtedness to him.

When, after eleven years of arduous work in the dissecting-room, John's health gave way and he had to go abroad, he was succeeded by William Hewson, a most able physiologist, the discoverer of the lymphatics in reptiles and fishes, of the white corpuscles of the blood and their origin in the lymphatic glands and spleen, of the true shape of the red corpuscles in man, of the nucleus of the red corpuscles in birds and fishes, and who also shed the first rays of light upon the nature of the coagulation of the blood and that everlasting puzzle the function of the spleen. Practically all Hewson's work was done during the dozen years he was associated (first as assistant, then as partner) with William Hunter; they separated eventually, and Hewson started dissecting-rooms of his own, but fell a victim to blood-poisoning from a dissection wound two years later, in his thirty-fifth year.

He was succeeded by William Cruikshank, the author of the first complete description of the distribution of the lymphatic vessels, and of various fruitful experimental researches into the functions of the skin and the regeneration of nerves. Many specimens connected with these researches have been recognised in the museum.

---

[1] Samuel Foart Simmons, *Life of William Hunter*, London, 8vo, 1783, p. 10.

[2] This fact and the amount of these expenses on *one department* of the Museum are well shown by Mr. George Macdonald, M.A., in the introduction to the *Stevenson Catalogue of the Hunterian Coins*, p. xxii, Glasgow, 1899.

The last I will mention is his nephew, Matthew Baillie, who may be described as the patron saint of the Pathological Society.

These were pupils of William Hunter, whom he took into his house, and, to use a curious expression he employed, "bred to anatomy;" but besides these there might be mentioned a later generation, trained in the traditions of the Hunterian school, who taught in it, and maintained its influence and its reputation for many years after the death of its founder and his pupils—of these I may name Sir Benjamin Brodie and Sir Charles Bell. Simmons, the author of the life of William Hunter on which all succeeding lives have been founded, sums up his influence in the words, "if anatomical knowledge is more diffused in this country than formerly, we are indebted for this, in a great measure, to his exertions."[1]

To make plainer the reforms which William Hunter effected, let us consider what were the courses of anatomy which he condemned as insufficient. In 1742, he tells us, he attended one of them, "by far the most reputable that was given here,"[2] and the whole course was comprised in thirty or forty lectures; only two bodies were used and those for demonstration only; "consequently the course was contracted into too small a compass of time, and therefore several material parts of anatomy were left out entirely." William Hunter's course extended over about four months, and a hundred meetings. "Some people," he said, "thought even my former courses too long; why? They had been used to see a course of anatomy finished in thirty or forty lectures; and therefore imagined that, when it took up nearly four months, it must be unnecessarily minute and prolix. But, let them reflect how imperfect such courses were; let them recollect that they never saw the human brain or nerves, nor the human lymphatic system, nor the human gravid uterus and its contents; let them recollect that there were few parts of the body which they understood thoroughly, after attending even repeated courses of this kind; and then they will see that there was great room for improvement, and own that an opportunity of attending a more complete course of anatomical lectures must be a national advantage."[3]

I have a copy of an excellent set of students' notes of his lectures,[1] which give us some interesting information. These I have compared with a number of other sets, and I believe they may be regarded as fairly accurate and reliable reports; probably, almost certainly, taken in shorthand, and rewritten; they read like verbatim reports. I counted the number of lectures in a set, and they amounted to 112.

---

[1] *Op. cit.*, p. 68.

[2] Apparently that of Dr. Frank Nicholls.

[3] *Introductory Lectures*, p. 100.

They were given daily, Saturdays included, and extra evening ones were added here and there to make the course complete within the short time given to it. The meetings lasted two hours; they were largely demonstrations, being profusely illustrated by dissections of the fresh subject, supplemented (but never supplanted) by permanent preparations of such things as "required considerable care to anatomize them so as to show their structure distinctly, as the eye and ear," or rarities which could not be obtained any day they were wanted, such as "the pregnant uterus, diseases, parts of singular conformation, &c."

Of the 112 lectures, 2 were introductory (these have been published); 80 were devoted to anatomy, which included a great deal of physiology and pathology; 15 were on operative surgery; 3 on the making of preparations and embalming; and the remaining 12 on midwifery, about half of the last mentioned being anatomical. But perhaps the greatest improvement of all was that students received "opportunities of exercising themselves in the practical part, which, before that period, they could not do in any part of Great Britain.[2] Before that time students rarely, if ever, dissected parts, and then only in private and secretly.

The importance of such a course can hardly be overestimated; excepting chemistry and materia medica, it was actually the whole of the science part of a medical student's education in those days. There were two such courses in each winter, and most students attended two of them—either the two in one winter, or in successive winters. William Hunter recommended the student to take no notes and not to dissect during the first, but to observe carefully all that was said and shown, and to frequent the dissecting room, where he "will see the preparatory dissection for every lecture; which will make the lecture itself much more intelligible, and fix it deeper in the mind; he will see all the principal parts dissected and demonstrated over and over again; whatever he finds he does not understand, there is such a number of bodies dissected in succession that he will at any time have an opportunity of attending to that particular object, and of getting it explained to him; he will see all the operations of surgery performed and explained again and again, and he will see the practice of all the arts of making preparations." Once he has prepared himself in this way to derive full advantage "from putting his own hand to the knife," "he cannot dissect too much."

---

[1] MSS., No. 42, c. 28 to 29, and 42, c. 31, in the library of the Royal College of Surgeons of England for the reports; No. 42, c. 25, for the numbers and the shorthand.

[2] *Petition to the King*, *Introductory Lectures*, p. 119. See also the Report of the Select Committee on Anatomy, 1828, p. 4.

The provision of such facilities for dissecting argues not only extensive and skilful dealings with the disreputable and unscrupulous resurrection men, who were really the only purveyors of dead bodies for dissection, but great courage; for popular prejudice was very strong and prone to result in violence, and there was no protection by the law. In fact, the anatomist, as the resetter of the stolen bodies, would seem to have been a wholesale violator of the law himself (this was actually decided in the courts of law in 1828); fortunately for science, the laws on the subject were not very clear, and in Hunter's time the administration of them was so lax that it was but rarely that a prosecution, even of the actual body-snatchers, was successful; popular violence was much more to be feared than the law.[1]

The condition of affairs was not at all to his liking; he foresaw that the existence of anatomical schools on such a footing would be, was bound to be, a precarious one; "without some public and permanent foundation, anatomy, and everything that depends upon it, must sink again to its former state." Therefore, in 1764, being then in the height of his powers and reputation as an anatomist, he put forward a scheme which deserved success. He petitioned Government to found a permanent school of anatomy, on the basis of his lectures, offering to endow it with his museum (already famous), and to provide a sum of money sufficient to erect a suitable building, if they would give him a site for it and the Royal protection. For himself he only asked that he should be the first lecturer. He offered, if his proposals were accepted, to curtail his practice in order to give more time to the lectures. The offer was treated with indifference, and we of this university are the richer for it, because it was this great disappointment that led him to leave his museum to Glasgow. His scheme for a great school of anatomy was carried out by his own energy, and entirely with his own capital. The Great Windmill Street School was the leading one in the metropolis till the establishment of University College and King's College (which took from it its principal teachers), and of improved schools in the great hospitals. It ceased to exist about 1830. It had done its work, and was no longer necessary.

---

[1] James Blake Bailey, *Diary of a Resurrectionist*, 8vo, London, 1896.

We learn from Simmons[1] that, as a lecturer, William Hunter "was a good orator, and having a clear and accurate conception of what he taught, he knew how to place in distinct and intelligible points of view the most abstruse subjects of anatomy and physiology. Among other methods of illustrating his doctrines, he used frequently to introduce some apposite story or case that had occurred in his practice, and few men had acquired a more interesting fund of anecdotes of this kind, or related them in a more agreeable way."

His own views on the importance of anatomy, and what a teacher of it should aim at, may be gathered from the following extracts from his petition to the King and from his introductory lectures.[2] "Anatomy is the only solid foundation for medicine. It is to the physician and surgeon what geometry is to the astronomer. It discovers and ascertains truths, overturns superstition and vulgar error, and checks the enthusiasm of theorists and of sects in medicine, to whom, perhaps, more of the human species have fallen a sacrifice than to the sword itself or pestilence."

"Anatomical lectures being intended to serve as a solid foundation for two such important arts as medicine and surgery, a teacher cannot take too much pains to render them useful; and if he is limited in time, it will require more particular care that the most essential things be well explained. And with that view he must be satisfied with touching more lightly such things as are of less importance, and even to pass over many things of little use, though perhaps curious, for in the study of nature there is no end if we give way to curiosity."

"With this view of my situation in life, I have always studied, and shall continue my endeavours, to employ the time that is given up to anatomical studies as usefully to the student as I can possibly make it. And therefore shall never aim at showing what I know, but labour to show, and describe, as clearly as possible what they ought to know. This plan rejects all declamation, all parade, all wrangling, all subtlety. To make a show, and to appear learned and ingenious in natural knowledge may flatter vanity; to know facts, to separate them from suppositions, to range and connect them, to make them plain to ordinary capacities, and, above all, to point out the useful applications is, in my opinion, much more laudable, and shall be the object of my ambitions."

---

[1] *Op. cit.*, p. 68.

[2] *Introductory Lectures*, p. 117 and p. 98.

We have ample testimony that he carried out the purpose expressed in these words.

There are several biographies of William Hunter which are sufficiently accessible to readers (though a really satisfactory life of him has still to be written), therefore you probably all know a good deal about his life; but I think it would be interesting to trace through the early years of his career the circumstances which determined its direction, especially as there are a number of interesting facts connected with it which have recently come to light, and which you will not find in any biography. After that I shall read a few extracts from his lectures to illustrate his practice of midwifery, and conclude with a demonstration of preparations.

William Hunter was born on 23rd May, 1718, at the farm of Long Calderwood, near East Kilbride—about 8 miles by road from Glasgow Cross. At 13½ he became a student in the Faculty of Arts in this University, and studied for five years, intending ultimately to enter the ministry. "But the idea of subscribing to articles of faith was so repugnant to the liberal mode of thinking he had already adopted, that he felt an insuperable aversion to theological pursuits. In this state of mind he happened to become acquainted with Dr. Cullen," whose "conversation soon determined him to lay aside all thoughts of the church, and to devote himself to the profession of physic." In 1737 he went to reside with Cullen at Hamilton, to assist him in his practice, more probably as apprentice than as partner, since Cullen was considerably his senior, and had already been qualified, as qualification went then, for several years, and had been in practice there for about a year. With him Hunter spent three years, which he afterwards described as the happiest in his life, commencing his medical education in what was then the usual way. In November, 1740, with a view to completing his education, he proceeded to Edinburgh, where he spent several months studying anatomy under the first Alexander Monro; and in the summer of 1741 went on by sea to London, provided with letters of introduction to a number of Scotsmen settled there, among whom were Smellie and James Douglas. At that time there certainly was an understanding that he should return to Hamilton and enter into partnership with Cullen, Hunter to take up the surgeon's side of the work, while Cullen devoted himself to the physician's. But he very early abandoned this idea. For a few weeks he resided with Smellie, who had reached London about two years earlier, and then Dr. James Douglas took him into his family as tutor to his son and "as an assistant in his dissection-room and in the surgery. Here," it is said, "he made himself so useful from his skill and fine hands in operating, and ingratiated himself so much with the family, that Dr. Douglas did not object to his paying his addresses to his daughter, Miss Douglas; which marriage never took place, as she died soon after it was agreed upon."[1]

Douglas' kindness to him seems to have been the turning-point in this part of his career, as we find, from a letter written to him by his father about the end of 1741, that already he was purposing not returning to Hamilton, and that it was the offers of assistance which he had received from Douglas that inclined him to stay in London. The change of plans did not interfere with his friendship with Cullen, who, it seems probable, already had it in his own mind to seek a wider sphere for his energies in Glasgow (into which he moved in 1744), and who apparently heartily approved of his friend's ambition to take the chance offered him of settling in London.

James Douglas was at this time one of the leading practitioners of midwifery in London, and a most accomplished anatomist. He is alluded to in Freind's *History of Physick* as "the first who has given us any true idea of the peritoneum." His name is always associated with it as the first describer of "Douglas's pouch." When Hunter joined him he was engaged upon the preparation of an atlas of the anatomy of the bones, the copperplates for which, to the number of 68, and a volume of proofs, were finished before his death; but he left no means for its publication, and though Hunter hoped at one time to be able to publish it, his hopes were never realised. The plates and proofs, after the death of Douglas' widow and son, passed into the hands of William Hunter, and are preserved in the Hunterian Museum.

While with Douglas, Hunter was also studying surgery in St. George's Hospital, and attending lectures on anatomy and experimental philosophy. In 1743, his first paper, "Of the Structure and Diseases of Articulating Cartilages, by William Hunter, Surgeon," appeared in the *Transactions of the Royal*

---

[1] Letter of Mistress Agnes Baillie to Dr. Matthew Baillie, quoted from Mr. Stephen Paget's *Life of John Hunter*, p. 33.

Society.[1] It has been very highly praised by Sir Benjamin Brodie, who said "that it anticipated nearly all that Bichat wrote on the same subject sixty years later." The paper and the fine series of preparations on which it was founded show that already he was a competent anatomist and a skilful dissector and injector.

In accordance with the last wishes of James Douglas, Hunter continued to live with the family and to act as tutor and guardian to the son, who was supposed to be studying medicine. Douglas had also expressed a desire that his son should go to Paris for further study, and that Hunter should go with him, which expedition came off in the autumn of 1743. Young Douglas was very dissipated and would do nothing, but Hunter made good use of his opportunities. The date and duration of the tour is fixed by a manuscript,[2] in his writing, which is preserved in the museum, entitled, "An abstract of the most remarkable things in Mr. Ferrein's course of Anatomical Lectures, read in 1743-1744." Ferrein was anatomist in the Royal Academy of Sciences in Paris, and professor of medicine and surgery in the Royal College of France. According to the *Biographie Médicale,* "he is to be regarded as one of the greatest anatomists of last century." The notes begin with Lecture IV—"Nov. 19th, 1743, N.S."—which was "Of Bones." The last which is dated was on 26th March, 1744, and there are several after that which are not dated. The course therefore lasted at least five months, and it contained about one hundred lectures. William Hunter's attitude towards the lectures is decidedly critical. He has taken very full notes of many of them, but a considerable number he dismisses with the remark that "they contained nothing new." He had reason to differ from his master in regard to the articular cartilages, and, to judge by the papers he published within the next few years, he found many other points open to criticism and correction. At the same time, this course, and the other experience which he would doubtless obtain at the same time, must have proved invaluable to him. The course was infinitely superior to anything he could have got at home; and there is a good deal of likeness between his way of arranging his course and treating his subject and that of Ferrein. We will see another result of this foreign tour later on, which shows his indebtedness to it.

Before going to France he had a scheme laid down for settling in London, for in 1743 he wrote[1] to his brother James that he had accepted an engagement to practise along with a certain Dr. Owen, son-in-law of Dr. John Douglas (brother of James Douglas), who had just died, leaving to him the succession to his practice. Owen wanted a partner, "as he was not capable for the surgery part, and wanted to be in the country in the summer season." To accept this partnership appeared to Hunter to be "the only way to settle in my darling London, to give lectures and be useful to you or Jockie" (Jockie was the family name for John Hunter). What the subject of the projected lectures may have been he does not here state, but it is certain that it was anatomy.

---

[1] *Phil. Trans.*, vol. xlii, p, 514.

[2] M.S., U. 2, 7.

In the same volume with M. Ferrein's lectures there is a set of "Notes on a course of Chyrurgical Operations performed before the Society of Navel Surgeons, by Sam Sharpe of Guy's Hospital, March, 1746, taken by William Hunter." If his attitude towards Ferrein's lectures was critical, towards Sharpe's it was doubly so. The following autumn Mr. Sharpe found himself so busy in practice that he could not continue the lectures, and the society asked William Hunter to take his place. According to Simmons, "he is said to have experienced much solicitude when he began to speak in public," but, anyhow, he proved so satisfactory to the members of the society that they asked him to give in addition a course of anatomy lectures. These were equally successful. Thus started his career as a teacher.

So far his inclinations and opportunities seem to have led him in the direction of becoming a surgeon, but soon after this a change appears. He was admitted a member of the Corporation of Surgeons in 1747. In the earliest advertisement of his lectures which has been preserved—in the *London Evening Post* of January 9-12, 1748—we find them figuring as follows[2]:—

"On Monday the 1st of February, at five in the afternoon, will begin a Course of Anatomical Lectures, to which will be added the Operations of Surgery, with the application of Bandages. By William Hunter, Surgeon. Gentlemen may have an opportunity of learning the Art of Dissecting during the whole Winter Season in the same manner as at Paris."

From this we see that anatomy has now deposed surgery from the first place in William Hunter's teaching, and it was also about the same time that he began in his practice to cultivate midwifery and what is now called gynæcology in preference to surgery. Immediately after this course he made a second Continental tour, to Paris, through Holland, where he visited Albinus, "whose admirable injections, as he afterwards told Dr. Cullen, inspired him with a strong emulation to excel in that elegant and curious branch of anatomy." He returned in time to prepare for his next winter's lectures, about a fortnight before the commencement of which he was joined by John Hunter, then 20 years old, and apparently very raw material indeed for an assistant. In the same year, according to Simmons, he was appointed one of the "surgeons-accoucheur" to the Middlesex Hospital, although there is no mention of this in Wilson's *History of the Middlesex Hospital,* and "at the most he could not have held office for more than a few months."[1] In 1749 he was appointed to the British Lying-in Hospital, with which he was connected for many years. Probably he picked up a good deal of Douglas' midwifery practice, and the retirement of several of the leading obstetricians about this time opened up to him great opportunities in this line, and gave him enough to do without trying to cultivate surgery, in which there were many able men, such as Percival Pott, Cæsar Hawkins, Sharpe, and Bromfield. We know, too, that as early as 1743 his attention had been strongly attracted by the problem of the nature of the connection between the mother and the fœtus, and that he had made dissections and performed experiments with a view to elucidating it. According to Simmons, "he had always an aversion to surgery," and Matthew Baillie[2] says "he very much disliked all operations which might give pain." In 1750 he received the degree of M.D. from Glasgow University, after which the title "Surgeon" disappears from his papers and its place is taken by the M.D. In 1756 he left the Corporation of Surgeons and joined the College of Physicians, for which he was fined by the former body. Soon he was recognised as the leading teacher of anatomy and practitioner of midwifery in London. In 1762 he was called to attend Queen Charlotte in her first confinement, and in 1764 he was made physician extraordinary to Her Majesty, an appointment which finally established his position as a physician and an accoucheur. Simmons remarks that "although by these incidents he was established in the practice of midwifery, it is well known that, in proportion as his reputation increased, his opinion was eagerly sought after in all cases where any light concerning the seat or nature of the disease could be expected from an intimate knowledge of anatomy." Many of these cases, to judge by his papers and the records of specimens in the museum, were surgical cases; also, to the end of his life, lectures and demonstrations of operative surgery formed a part of his course of anatomy.

---

[1] Paget, *Life of John Hunter*, p. 41.

[2] *Ibid.*, p. 24.

---

[1] *The Middlesex Hospital Journal*, vol. ii, No. 8, p. 90, 1898.

[2] *Lectures and Observations on Medicine*, 1825, p. 75, London, 8vo.

The conjunction of the practice of midwifery with the teaching of anatomy is a subject which it would be interesting to discuss at length. I think the feeling of this meeting would be that they are incompatible occupations; but the fact remains that William Hunter practised midwifery with the greatest success while he was actively engaged in not merely lecturing on anatomy, but himself dissecting and also, from time to time, performing *post-mortem* examinations. Could we with our antiseptics and knowledge of bacteriology do as much? In this connection it is interesting to read in his lectures what he says about puerperal fever. "After labour there is nothing more common or terrible than what is called the childbed fever;" in one year he saw it so bad at the hospital "that not only every gentleman belonging to the hospital, but all our friends in town, had a consultation to think whether it was not better to shut up the house. In two months thirty-two patients had the fever, and only one of them recovered." But since that year he had seen less of it: "I have not now for these three years lost one patient." The cause of the fever he could not understand; he did not connect it with his anatomical pursuits. "I believe the reason of my not losing so many patients now is owing to my taking every day more and more care of my patient, observing the greatest caution in their not catching cold; I should be glad to know of a certainty whether these fevers arise from cold or not. If they do, we know how to prevent them, which is almost as well as to know how to cure them."[1]

William Hunter's diary of attendance on the Queen is preserved in the museum. His position was that of a consultant, being first called in by the regular attendant, Mr. Hawkins, about the middle of the pregnancy, on account of Her Majesty being troubled with a "cough and heat," for which Mr. Hawkins "thought it would be proper to bleed," but before doing so he desired further advice. Her Majesty was bled to five ounces. After the first visit William Hunter was frequently in attendance for consultation, and when the labour set in was called to St. James', to be at hand if required.

---

[1] *Midwifery Lectures*, MS., Royal College of Surgeons of England, 42, c. 31, p. 195.

He and Mr. Hawkins waited in the anteroom, and had nothing whatever to do with the actual confinement, which was managed by the midwife, Mrs. Draper, who reported progress to them from time to time, but did not require to call them in, as the labour was an easy and natural one. After the birth of the child they were called in to inspect him and the placenta, and to feel the Queen's pulse and give a few directions as to after-treatment, which did not amount to much as the case ran a strictly normal course. Hunter visited the Queen twice daily for about a fortnight after the confinement, and after that only a few times, and then mainly to see the young prince, who suffered from a variety of trifling ailments. He attended in a similar way at the succeeding two confinements. After the third the diary ceases, though he still continued to be physician extraordinary.

There is a letter to Mr. Hawkins, in reply to an enquiry what should be done by way of preparing Her Majesty for confinement, which is worth quoting. The usual practice of the time was to reduce the patient by free bleeding and purging. Hunter writes, "I am clear in my opinion that it is judicious practice to take away some blood in the last month of pregnancy, when the patient is heated or has symptoms of fulness—that as labour is not a disease, it does not require that the constitution should be reduced by way of preparation; and, therefore, when the patient is cool and has no marks of having too much blood, the taking it away cannot do good, and may do harm." The Queen, much to her delight, as she hated bleeding, was not bled further. This episode illustrates the principles of careful observation of nature, of trust in her powers, and of unwillingness to interfere unless in response to direct indications, which he carried into all his practice, and taught to his pupils. These principles, and the style of his lectures, may be further illustrated by his attitude towards instrumental midwifery.

His aversion to the use of instruments in midwifery is well known and often referred to, but it is not always correctly or fairly stated.

Speaking of vesico-vaginal fistula he says—"Laceration of the bladder sometimes happens in labour, or it is bruised so by instruments that it separates and opens into the vagina." "So many of these accidents I have seen happen, that I have an antipathy to every instrument if not cautiously used." As an example of the criticisms, Fischer wrote that, "Smellie gave the forceps to England, and Hunter took them away again,"[1] and Hunter has been blamed for the forceps falling into such neglect that craniotomy became a very customary operation with English physicians. There is certainly some truth in this criticism, yet it is not a just one.

For what he himself thought of the effect of his teaching on the frequency of craniotomy in England, we may recall the passage quoted near the beginning of the lecture, and we may add the following strong remarks. He advised that the head of a living child should never be opened without a consultation; "some are so unfeeling or ignorant that they have thought a case required the operation when it was quite fair, but laborious; or they may be such villains that they have gone on to the rash step to save time when there has not been the least necessity for it in the world. That such may never have an opportunity to murder children it ought always to be a rule with us never to do the operation alone, hence others cannot without being reflected on."[2] He preferred the forceps, "which are really artificial hands," to the perforator and crotchet; "suppose a child's head be so large that it cannot pass in a crooked pelvis, if you wait for a considerable time you will find very often that the child, though large, will yet be born alive, or at least the head will come low down, so as to be delivered by the forceps. After having given a woman a fair trial, it would be cruel to leave her any longer in pain. But be always very sure nature can do no more before you open a child's head."[3]

In regard to the forceps there are various passages which are often quoted, but I prefer to give you new ones, which I have reason to regard as well authenticated, and which have the additional merit of being fuller and more complete in themselves than many of those others. For example,[4] "We who are in great business see what nature will do for herself. On some occasions, however, it may be necessary and right to use the forceps, but taking all the cases together wherein they have been used, my opinion is in nineteen out of twenty they had better been left alone. For my own practice I have not taken with me a pair of forceps for these ten years, nor anything of that kind, and if they cannot give me a pair of scissors I must bite the membranes through with my teeth. Such a thing as once in a twelvemonth, or now and then in two years, I have a case where I think it is right to use the forceps, but not before I see what nature can do. Sometimes when the child's head is large it comes down slowly, the woman is rendered weak and exhausted, and the pains are become trifling, so that in such a case, where nature is ineffectual, the forceps may be applied, but I use them with great caution and the utmost delicacy in the world;" and again, "never wish, gentlemen, to gain reputation by doing business quick; always take time, particularly in applying the forceps; and when the pain is off, unlock them that you may not squeeze the child's head; and when the head is delivered I often take away the forceps that I may have my hand more at liberty to support the woman. In a few cases I think the forceps an useful instrument; to a poor woman that is exhausted they may be of considerable service, but I wish to God they had never been contrived. I am convinced the forceps has killed three, I may say ten, women to one that it has saved, and, therefore, we should never use it on any occasion but where it is absolutely necessary." [1]

---

[1] C. E. Fischer, *Bemerkungen über die Englische Geburtshülfe*, 1797, quoted from Siebold's *History of Midwifery*, vol. ii, p. 354, Berlin, 1845.

[2] *Midwifery Lectures*, MS., Royal College of Surgeons of England, 42, c. 31, p. 165.

[3] *Midwifery Lectures*, MS., Royal College of Surgeons of England, 42, c. 31, p. 194.

[4] *Midwifery Lectures*, MS., Royal College of Surgeons of England, 42, c. 31, p. 167.

How far William Hunter was justified in the sweeping condemnation of the forceps expressed in the second passage we can hardly tell, for of course there is no record of the tragedies resulting from the abuse of them which prompted him. A striking instance of the tragedies that result from too great fear of them is detailed in vol. ii of *Playfair's Midwifery*, eighth edition—the death in childbed of Princess Charlotte in 1817 in the hands of some of Hunter's pupils. Where a man has had strong views his disciples are apt to follow them out over-zealously. Extreme carefulness in the master is apt to produce fearfulness in the pupils. In this particular case the head was low in the pelvis and the woman exhausted, yet they saw no sufficient indication for the use of instruments. The patient, a delicate young woman, had been prepared for the trial before her "by lowering the organic strength of the mother, by bleeding, aperients, and low diet." Surely this was not in accordance with the teaching of William Hunter. At least, so far as I have been able to understand it, and I have endeavoured to place it before you by quoting his own words at such length as to give a fair and just picture of their meaning, it was not;

---

[1] *Midwifery Lectures*, MS., Royal College of Surgeons of England, 42, c. 31, p. 180.

and it is hard that William Hunter should be blamed for the very evident retrogression of his pupils from the sound judicious principles of practice which he had laid down.

Dr. Teacher then proceeded with the demonstration of preparations. About thirty were shown, illustrating principally the anatomy of the placenta and the decidua. Roughly speaking, the obstetrical series is arranged in the order of the anatomical part of William Hunter's midwifery lectures. "We are now going to treat of the impregnated or pregnant uterus. We have already seen the uterus in its unimpregnated state. I shall show you some real preparations of the gravid uterus, and also some others in plaster of Paris, and in the last all the sizes of the parts with their shape and situation are exactly as in nature herself, . . . and almost as good as the fresh subject." With these casts, which also show the attitude of the fœtus in utero, the series commences. They correspond to a number of the large plates in the *Gravid Uterus*, and they are actual casts taken of the same subjects as the plates at various stages of the dissections. These are followed by preparations of the muscular wall of the gravid uterus, then the blood-vessels supplying it, the condition of the cervix at various stages of gestation, the tubes and ovaries, the decidua and the various parts of the human ovum in the later months, the development of the placenta and embryo and the early stages of the decidua, and, lastly, the comparative anatomy of the placenta and membranes—in all about three hundred preparations.

The first preparations shown were two injected dissections showing the enormous size of the uterine vessels at term as constrasted with their condition in the non-gravid state, and the distribution of the greater number of them to the placenta. Next, No. RR. 21 (No. 48, 32 in the new catalogue), a most beautiful preparation of "one side of the gravid uterus at the sixth month, with placenta adhering; the red injection returned by the veins of the mother from the hypogastric artery; not a drop got into the cord, though the uterus was exceedingly red; the cord was afterwards injected white and black." It demonstrates the distinctness of the fœtal and maternal circulations. This was, as Hunter was aware, strictly speaking, not a new discovery. Harvey[1] was of opinion that the blood of the mother did not pass into the vessels of the fœtus, nor that of the fœtus into the vessels of the mother, though they were brought into some very close relationship in the placenta.

---

[1] *De Generatione Animalium*, London, 1651.

by means of which the nutrition of the fœtus was carried on. But in Hunter's early days the reigning theory was that "the red blood passes by continuity of canal from the uterus into the blood-vessels of the fœtus," circulates through its body, and returns again to the mother. Strange to say, the holders of this opinion also thought that the fœtus was nourished by swallowing the liquor amnii. Hunter, by his injections, "first on animals, and later in the human subject," proved beyond cavil the independence of the circulations, and revived Harvey's correct ideas regarding the nutrition of the fœtus in utero. "From what I can make out from injections and every other way I shall certainly conclude that the red blood does not pass from the mother to the child. I no more doubt this than I do that the blood does not pass from the hen to the chick." "The child," he continues, "is entirely nourished by the navel string," the placenta alone being the medium by which the functions of nutrition, excretion, and respiration are performed.

In favour of the other view, he told his students, there were many cases on record of mothers having bled to death by the navel string, and of fœtuses found bloodless through a flooding which had destroyed the mother. "Thus it is asserted, but they are deceived, . . . there is no believing these things unless they come from a man of great accuracy and delicacy. He should be accurate in his observations and faithful in his narratives. These qualifications do not combine among philosophers and learned men once in one hundred times; most philosophers, most great men, most anatomists, and most other men of eminence lie like the devil." Plain speaking for a professor addressing his class!

This proof, and various discoveries relating to the anatomy of the placenta and the nature of the decidua, were claimed by John Hunter, and his claims have been very generally accepted as made good, but in the last fifty years opinion has turned strongly in favour of William. Dr. Teacher is of this opinion. There is no doubt, as William Hunter acknowledged, that John did, as a young and "excellent" assistant, help his brother with the injections and dissections; but no one who reads their works and contrasts the beautiful accuracy and simplicity of William Hunter's descriptions with the inaccuracies of observation and the fanciful theories which are to be found in John Hunter's papers *on this particular branch of anatomy and physiology*, can doubt that it is to William that almost the whole credit of the discoveries belongs.

Next were exhibited a set of preparations of the part of the uterine wall to which the placenta had been attached, showing the curling arteries, the oblique orifices of the veins, and the interlacing muscular fibres between which they pass. Next, a set of preparations showing the decidua and fœtal membranes at different stages of gestation; the thickness of the decidua in the early stage, its gradual thinning, its vascularity from the uterus, and the relations of the three parts—vera, reflexa, and serotina. Also, "an uterus where there had been an ovum in one of the fallopian tubes; the fallopian tube is distended to nearly the size of a hen's egg, and has been ruptured, the ovum probably passing out into the cavity of the belly; what is remarkable is the increase of the uterus, as if it contained an ovum, and the presence in it of the decidua, which is clearly proved by this preparation to be formed by the uterus, and to be independent in some measure of the ovum" (Old Catalogue, RR. 367, New Catalogue No. 49, 2).

Then a set of placentæ, whole and teased, and injected in various ways, showing (1) the fœtal portion—the chorionic villi, (2) the maternal blood spaces—intervillous spaces—injected, and (3) preparations of the placenta in the cow, in which the fœtal and maternal parts had been separated from one another by maceration and dissection.

Then a number of dissections, of abortions chiefly, showing the ovum and embryo from about the third to about the tenth week.

The demonstration concluded with the beautiful dissection of the gravid uterus at four months, which is figured in the portrait by Sir Joshua Reynolds, and which is of special interest as being from the case in the investigation of which William Hunter discovered the till then unrecognised condition of retroversion of the gravid uterus, and also indicated the means of diagnosing and treating it.

ON THE POSITION OF THE GRAVID UTERUS AT THE ONSET OF LABOUR WITH REGARD TO LATEROFLEXION AND ROTATION.

BY ALEX. MACLENNAN, M.B., C.M. GLAS., L.M. ROTUNDA.

WHILE palpating the abdomens of patients admitted to the Glasgow Maternity Hospital during my term of residence there as in-door house surgeon, I noted the position of the gravid uterus (usually shortly after the onset of labour) in most cases.

For the purposes of this paper I will refer only to cases where the presentation and position of the child had been at the same time ascertained without doubt, and had subsequently been verified by vaginal examination, &c. (In unusual cases evidence confirming the diagnosis is adduced.)

The position of the uterus was located by palpation of the round ligaments,[1] which hypertrophy with the enlarging uterus. They become specially recognisable during the pains, for their muscular fibres contract with those of the uterus.

The uterus was noted as showing *flexion* to the right or left according as its long axis diverged to right or left of the middle line. Auvard,[2] in an exhaustive article on lateral obliquity of the gravid uterus, affirms that the obliquity is in almost all cases apparent only, and that this apparent obliquity is due to an exaggerated development of one side of the uterus—leaving the long axis in the middle line, but giving the appearance as if the long axis inclined to one or other side. He says that the right side usually develops more than the left, just as it happens that most people are right-handed, and that the uterus falls to the side which shows the greater development.

It seems to me to be little explanation of the fact that the new longitudinal axis, which comes to be the virtual one, should lie to the right side, to affirm that that side develops more than the other. For all intents and purposes the newly developed longitudinal axis is the true longitudinal axis of the uterus. One would imagine, also, if one side grew more than the other, that the uterus would be curved over to the opposite side. Auvard's diagrams make his theory very plain, but the abdominal contents acting mechanically would act upon the newly-shaped uterus as if its apparent axis were the real one. It is conceivable that excessive one-sided growth of an organ might make it fall towards the same side; but in the case of the uterus, whose walls at term range from $\frac{1}{6}$-inch to $\frac{1}{4}$-inch in thickness,[3] there is no reason why a bulge on one side should do anything more than displace the uterus a little towards the opposite side. There is no doubt that the gravid uterus shows anything but a correct mathematical figure. I have often found the gravid uterus round at one corner while angular at the other, the angular pole being occupied by the placenta. Such a uterus would not, however, be said to show lateral obliquity. The irregular uterus will take up the position in the abdomen where it finds most room, just as any other semi-detached and freely movable body would. Again, if one side of the uterus grew more than the other, one would expect to find considerable disproportion in the lengths of the round ligaments, but this does not exist.

---

[1] *Schrœder's Geburtshilfe*, Olshausen and Veit, 1888, p. 101.

[2] Auvard, *Travaux d'obstetrique*, Paris, 1889, T. iii.

[3] Lusk, *Science and Art of Midwifery*, London, 1896, p. 78.

Rotation of the uterus was accepted if the origin of one or other round ligament indicated that the corresponding lateral aspect of the uterus was situated more anteriorly than normally. Diagrams were made after the following pattern (Fig. VI (*a*), p. 41), which shows flexion and rotation to the right.

That the gravid uterus should lie asymmetrically is only to be expected when one recalls its relations to the vertebral column (with its anterior curvature exaggerated into a lordosis) and its various attachments in its inferior aspect; but why the asymmetry should be preponderatingly in the direction indicated in the diagram is striking.

Many reasons have been brought forward in support of as many theories to explain the phenomenon, such as that of Levret,[1] who asserted that the uterus falls to the side of the placenta. In this he was supported by many of the older authorities. The site of the placenta has been shown by Murdoch Cameron[2] usually to lie to the side apposed to the abdomen of the child. He thinks the frequency of L.O.A. positions is due to the site of the placenta being usually situated in the right superior part of the uterus. When the back comes to lie against the placenta there is some interference with the circulation, followed by spasmodic movements of the child. Thus the back takes up a position opposite to the placenta by way of accommodation. To affirm, however, that because the placenta is usually right-sided therefore the uterus falls to that side is about as absurd as to give the same *rôle* to the fœtal limbs. Paul Dubois[3] and Deleurye[4] thought that the latero-flexion might be caused by an habitual posture taken by the *gravidum*, and that the heavy uterus would fall towards the side on which she lay most frequently, usually the right.

Auvard,[5] in his researches on this subject, though admitting a certain rôle to decubitus, does not think that it plays an important part in the causation of lateral obliquity. Cazeaux and Tarnier[1] found, in attempting to test the postural theory, that the women's statements did not bear out the assertion of Dubois and Deleurye.

---

[1] Levret, *L'art des accouchements*, 1761, Tome i.

[2] Cameron, *British Medical Journal*, 29th February, 1896.

[3] Paul Dubois, from *Obstetrics*, by Cazeaux and Tarnier, 1885, English translation, p. 127.

[4] Deleurye, *Des obstacles de la part de la mère qui rendent l'accouchement contre nature*, 1777, second edition, p. 353.

[5] Auvard, *loc. cit.*

Madame Boivin[2] imagined right deviation to be due to shortening of the right round ligament. Pajot,[3] however, on measurement found that shortness of this ligament did not exist sufficiently to account for the flexion of the uterus. Cruveilhier,[4] on the other hand, supposed that any shortening of one round ligament was due to effect and not to cause.

Désormeaux[5] and Playfair[6] mention that the lateral flexion is due to rectal distension, while Dubois[7] thinks that rectal will be compensated for by cæcal pressure. The influence of rectal distension as an adequate cause of lateral displacement is taken exception to by Milne Murray[8] because of the great number of cases where the uterus is not so displaced, although the rectum is almost always distended. In his paper he records a series of cases where, with occiput posterior presentations, flexion and rotation were present to the left; and he deduces from these facts that there is some relationship or association between flexion and rotation. In the same paper Milne Murray tries to show that uterine torsion or rotation is due to asymmetry in the muscular arrangements of the uterus, while in an earlier paper[9] he says that the deviation or flexion is due to the torsion. It seems strange to assert that the anatomical irregularity of the uterine muscle should cause such a uniform deviation to the right in both transverse and longitudinal areas unless the irregularity of the fibres is stereotyped, in which case the criticism applied by Milne Murray to Désormeaux's and Playfair's theory might be applied to his own—viz., that too many exceptions spoil the rule.

Probably the uterine muscular arrangements are pretty uniform in their irregularities, and the obliquely running fibres during contraction would certainly rotate the uterus; but the rotation is not often enough in the same direction for this theory to be accepted. Again, how should presentation of the fœtus influence the anatomical characters of the uterus? Milne Murray's observations regarding the association of left deviation and occipito-posterior presentations refer, however, to the post-partum uterus.

---

[1] Cazeaux-Tarnier, *Obstetrics*, English translation, 1885.

[2] Boivin, from Cazeaux-Tarnier, *Obstetrics*, English translation, 1885.

[3] Pajot, from Cazeaux-Tarnier, *Obstetrics*, English translation, 1885.

[4] Cruveilhier, from Cazeaux-Tarnier, *Obstetrics*, English translation, 1885.

[5] Désormeaux, from Cazeaux-Tarnier, *Obstetrics*, English translation, 1885.

[6] Playfair, *Obstetrics*, vol. i, 1876.

[7] Dubois, *loc. cit.*

[8] Milne Murray, *Edinburgh Medical Journal*, 1897, n. s., i, p. 160 *et seq.*

[9] Milne Murray, *British Medical Journal*, December, 1896.

Almost all observers are at one in stating that right flexion is the rule. Murphy[1] and Meigs,[2] however, state that lateral obliquity usually exists to the left. Winkler[3] gives statistics showing right flexion to be commoner, while left torsion or rotation is more frequent than right. Dewees[4] and Playfair[5] affirm that rotation is normally to the right. Auvard[6] gives as his own the following figures:—

Right obliquity,	55 per cent,	33 per cent	primiparæ.
		22 ,,	multiparæ.
Left ,,	5 ,,	2 ,,	primiparæ.
		3 ,,	multiparæ.
In median line,	40 ,,	15 ,,	primiparæ.
		25 ,,	multiparæ.

He also gives those of Dubois and Pajot as—

Right obliquity, ...	76 per cent.
Left ,, ...	4 ,,
In median line, ...	20 ,,

In my own 35 cases there were—

Right obliquity, 11, ...	8 primiparæ.
	3 multiparæ.
Left ,, 3, ...	3 primiparæ.
In median line, 21, ...	11 primiparæ.
	10 multiparæ.

He seems to think that the form of the uterus has a great influence on the *position* of the child, and his statistics bear out his assertions. He shows that the breech lies in the "cornu" most developed—*i.e.*, it lies towards the side to which the uterus is inclined.

Pinard,[7] in his work, *Palper Abdominal*, while discussing the shape and position of the uterus with reference to the presentation of the child, denies that any relationship exists. Winkler[1] agrees with him in this. My own cases do not show any apparent uniformity between presentation or position of the child, and position of the uterus.

---

[1] Murphy, *Lectures on Parturition*, p. 106.

[2] Meigs, *Obstetrics*, 1849, p. 204.

[3] Winkler (N. F.), *Jen. Zeitsch. f. Med.*, iv, Heft. 3 und 4, S. 522, "Ueber die Stellungen des graviden und puerperalen Uterus."

[4] Dewees, *System of Midwifery*, Philadelphia, 1847, p. 103.

[5] Playfair, *loc. cit.*

[6] Auvard, *loc. cit.*

[7] Pinard, *Palper Abdominal*, Paris, 1889, second edition.

Pinard, in the work referred to, mentions that lateral flexions of the uterus are more common in multiparæ than in primiparæ, while Auvard states the reverse. My observations are seen in the following table:—

35 cases,	22 primiparæ,	Flexion,	11
		No flexion,	11
	13 multiparæ,	Flexion,	3
		No flexion,	10

Thus, in primiparæ 50 per cent show flexion, while only 23 per cent in multiparæ are latero-flexed. These figures are, of course, too small to lay any stress upon; but it is only to be expected that, where the intra-abdominal tension is greatest, there displacements of the uterus to one or other side of the spine will be more evident.

The uniformity of right flexion associated with right rotation led me to take notes of the cases as they presented themselves; and, after looking over the analysis of the cases, I cannot but think that there is some association between flexion and rotation. I cannot conceive how the twisting or rotation of an organ should make it more prone to bend to the side, as Milne Murray seems to think.[2] Twisting any structure usually makes it more rigid. Looking at the cases of multiparæ, one sees that the uterus is more likely to be in the middle line if it shows rotation or torsion than is the case in primiparæ.

Thus, in multiparæ there were in the middle line 10; of these, rotation was found in 6. In primiparæ there were in the middle line 11; and of these, rotation was found in 4. Thus, when the multiparous uterus is stiffened by rotation, it is more likely to be found in the middle line than when it is not rotated. It is also true that an equal number of cases are found in the middle line associated with, as without, rotation; those in the middle line without it are mostly primiparous uteri.

Rotation of the uterus unaccompanied by latero-flexion implies laxness of both round ligaments, while flexion would be produced by relative tightness of one, which has been shown by Pajot not to exist. Rotation to the right could never be caused by tightness of the right round ligament, which would draw its corresponding cornu forwards, and so produce a left rotation.

---

[1] Winkler, *loc. cit.*

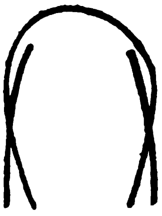
[2] Milne Murray, *British Medical Journal*, December, 1896.

According to Winkler,[1] the cause of right flexion is purely a mechanical one, and Pinard agrees with him. Admitting, then, the almost normal position of the uterus to be towards the right side, then the left round ligament will be tightened and will draw forward the left cornu, thus producing right rotation. In this way, I imagine that flexion has more to do with rotation than *vice versa.* All my cases showing flexion showed rotation as well, except two which were complicated with contracted pelvis. Rotation of the uterus, which exists in many cases alone, is a method of accommodation of the uterus in the abdominal cavity with regard to the spine. It can only exist where both round ligaments are relaxed.

Ferguson,[2] in his paper, states that rotation is due to muscular action, that it is usually towards the right side, and that it is increased at term and during labour. He thinks that it is influenced by the position of the fœtus. In this he agrees with Schrœder and Shatz, while he states that Lusk,[3] Spiegelberg, and G. Martin do not think that the position of the fœtus influences rotation of the uterus.

The following diagrams indicate better than a table the various possible uterine positions with regard to latero-flexions and rotations:—

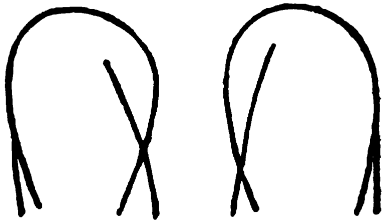
SYMMETRICAL UTERUS.
I.



7 primiparæ.
4 multiparæ.
—
11 cases.

ROTATION ALONE.
II.

RIGHT (*a*). LEFT (*b*).



3 primiparæ.
2 multiparæ.
—
5 cases.

1 primipara.
4 multiparæ.
—
5 cases.

---

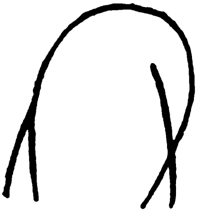
[1] Winkler, *loc. cit.*

[2] J. Haig Ferguson, *Transactions of Edinburgh Obstetrical Society*, vol. xviii, p. 110.

[3] Lusk, *loc. cit.*, p. 76.

ROTATION TO RIGHT—FLEXION TO LEFT.

IV.

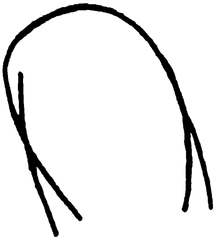


1 primipara.

FLEXION ALONE.

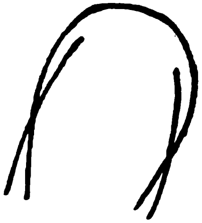
III.

RIGHT (*a*).



No case.

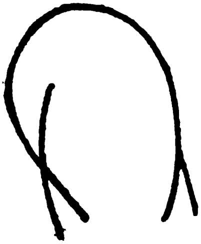
LEFT (*b*).



2 primiparæ.

ROTATION TO LEFT—FLEXION TO RIGHT.

V.

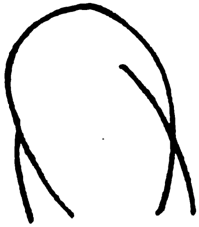


No case.

ROTATION AND FLEXION.

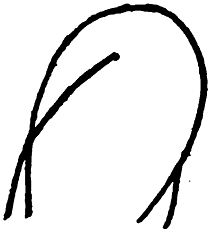
VI.

RIGHT (*a*).



8 primiparæ.
3 multiparæ.
—
11 cases.

LEFT (*b*).



No case.

I. Symmetry—11 { 7 primiparæ. 4 multiparæ.

II. Rotation alone—
- (*a*) Right, 5 { 3 primiparæ. 2 multiparæ.
- (*b*) Left, 5 { 1 primipara. 4 multiparæ.

III. Flexion alone—
- (*a*) Right, No case.
- (*b*) Left, 2 primiparæ (complicated with contracted pelves, Nos. 1 and 14).

IV. Rotation to right and flexion to left—1 primipara.

V. Rotation to left and flexion to right—No case.

VI. Rotation and flexion—
- (*a*) Right, 11 { 8 primiparæ. 3 multiparæ.
- (*b*) Left, No case.

The following is the list of cases in detail:—

I. PRIMIPARÆ.

1. Left flexion, no rotation, contracted pelvis, presentation R.O.A., Cæsarean section.

2. Left flexion, right rotation, presentation L.O.A.

3. Symmetrical, presentation L.O.A.

4. Middle line, rotation to left, presentation R.O.A.

5. Right flexion and rotation, presentation R.O.P. (*per vaginam*, anterior parietal bone overlapping posterior, found post-partem to be left parietal overlapping right, other vaginal signs of occipito-posterior presentation. Fœtal heart sounds heard best in right lower umbilical region).

6. Middle line, right rotation, presentation L.O.A.

7. This case is omitted from statistics. Uterus symmetrical, presentation R.O.A. Two days later, right rotation, fœtal limbs posterior; later on same day, marked rotation to left, right ovary at umbilicus.

8. Symmetrical, presentation L.O.A.

9. Right flexion and rotation, presentation R.O.P., contracted pelvis (forceps after engagement, rotation with forceps on. Mark of right blade over right eye and forehead of child).

10. Right flexion and rotation (extreme), presentation R.O.P. (vaginal and palpation signs, forceps, persisted as occipito-posterior).

11. Right flexion and rotation, presentation L.O.A.

12. Median line, marked right rotation, presentation L.O.A.

13. Symmetrical, presentation R.O.A.

14. Left flexion, no rotation, presentation L.O.A. (contracted pelvis, craniotomy).

15. Right flexion (extreme) and rotation, presentation L.O.A.

16, 17, 18, 19. Symmetrical, presentation L.O.A.

20. Median line, extreme right rotation, presentation L.O.A.

21, 22. Right flexion and rotation, presentation L.O.A.

23. Right flexion (extreme) and rotation, presentation R.O.A. (forceps).

II. MULTIPARÆ.

24. Right flexion and rotation, presentation L.O.A.

25. Median line, right rotation, twins—first in R.O.P., second in fourth breech.

26. Symmetrical, presentation R.O.P. (palpation and vaginal signs, fœtal heart sounds best heard in right umbilical region, child small, occipito-posterior position persisted, caput on anterior superior angle of left parietal bone).

27. Symmetrical, presentation L.O.P. (palpation and vaginal signs, fœtal heart sounds best heard to the left, restitution to the right, spontaneous rotation).

28. Median line, rotation to left (extreme), presentation R.O.P. (palpation and vaginal signs, fœtal heart sounds best heard right, contracted pelvis, forceps, rotation with forceps on).

29. Right flexion and rotation, presentation L.O.A.

30. Median line, left rotation, presentation L.O.A.

31. Right flexion and rotation, presentation L.O.A.

32. Symmetrical, presentation R.O.A.

33. Median line, left rotation, presentation L.O.A.

34. Median line, right rotation, presentation R.O.A., contracted pelvis, engagement in the transverse, occiput to left.

35. Symmetrical, presentation L.O.A.

36. Median line, slight left rotation, presentation R.O.P. (forceps later on at outlet, then presentation R.O.A.

Finally, I would draw the following conclusions:—

1. Right flexion with right rotation is by far the commonest deviation. No case of the converse was met with.

2. Flexion is caused by purely mechanical conditions, and it will tend to produce rotation to the same side.

3. Flexion has no relationship with presentation or position of the fœtus.

4. Rotation is due to laxness of the uterine ligaments, and possibly to an irregular contraction, but not to an irregular arrangement of the muscular fibres. It may replace latero-flexion as an attempt at accommodation. One case, No. 7, showed in the space of three days, first symmetry, then rotation to the right, and finally rotation to the left.

5. Only two cases of flexion without rotation occurred, and these were complicated by contracted pelvis (Nos. 1 and 14).

6. An absolutely symmetrically-placed uterus is more common in primiparæ, but one medianly placed, if accompanied by rotation, is commoner in multiparæ.

My best thanks are due to Drs. Black and Jardine, visiting physicians to the Glasgow Maternity Hospital, for permission to utilise the cases referred to in this paper.

UNCORRECTED ERRORS OF REFRACTION AND THEIR RESULTS.

By LESLIE BUCHANAN, M.B., C.M.,

Assistant Surgeon and Pathologist, Glasgow Eye Infirmary; Pathologist, Victoria Infirmary.

Much as has already been written upon this subject, both at home and abroad, the great importance, both from an æsthetic and a utilitarian point of view, of having errors of refraction of the eyes accurately corrected can hardly be too often taken as a subject of consideration.

Although we hear, now and again, of startling results obtained by surgeons who narrate cases in which, by the timely intervention of the refractionist, such operations as hysterectomy, oöphorectomy, &c., have been averted, it is not in such extreme cases as this that our interest should chiefly be centred, but rather in those cases of eye trouble which are of daily occurrence, and form a large part of both the public and the private practice of the oculist.

It may be considered that the time for writing of such subjects as "eye-strain" and asthenopia is past, but experience teaches us that there are still large numbers of persons who are suffering from these without being aware of it, and who consider that they must just bear these troubles, since antipyrin, &c., will not permanently cure their headaches, and lotions and ointments will not prevent the recurring attacks of weak eyes.

Many of such people, it is true, do wear spectacles, but it is generally found that such spectacles are but little suitable, and hence do not give the desired relief.

Within the limits of a paper such as this it would be quite impossible to discuss fully all the symptoms of asthenopia, and the evidence which tends to support the contention that they are actually the results of eye-strain. Only a few of the former will be mentioned, and with regard to the latter, it will simply be stated here that accurate correction of ametropia or error of refraction does very frequently permanently relieve such symptoms.

The fact that long dissertations upon myopia and its evil consequences are frequently seen, whilst but few text-books dwell upon the result of leaving hypermetropia and hypermetropic astigmatism uncorrected, has perhaps tended to lead the writer to deal with these rather than with the former; but also it is in hypermetropia that there is the greatest amount of accommodative strain, and consequently the resultant symptoms are most manifest in such cases.

It very frequently happens that the myope is not aware of the fact that his range of vision is limited—does not even know that he sees less perfectly than his neighbour, but the hypermetrope is constantly exercising his accommodation, and indeed frequently induces cramp or spasm of his ciliary muscles in his efforts to secure distinct near vision, and thus induces the symptoms correctly enough, if popularly, termed eye-strain.

Diverse as are the symptoms, both general and local, which may indicate that the eyes are being overworked, it not infrequently happens that they are either overlooked or misinterpreted.

As refractive defects of the eyes are generally congenital, and one is almost forced to believe, no matter what the defect may be, hereditary, it is frequently the case that many members of a family suffer from "weak eyes," and the parents being similarly defective, the resultant symptoms are but little noticed, or simply allowed to remain as a family weakness.

Again, as the symptoms resulting from non-correction of refractive errors are usually dependent upon muscular exertion, which is a varying factor, they may not be considered in their proper relation to the eyes, but be ascribed to some entirely different cause.

It must be remembered, however, that there may be very little evidence of visual defect until examination is made, on account of the very magnitude of the error. This is specially so in the case of children with high astigmatism (say 3 to 6 dioptres), where compensatory correction by great accommodative effort is hopeless, so that unless the actual obscuration of vision be complained of or noticed, the child may grow up ignorant of its loss.

From these considerations it will be evident that it very frequently falls to the lot of the school teacher, the fellow worker, or the oculist to call attention first to the fact that the eyes are defective as they are.

Although it is by no means in young people only that eye-strain is manifested, it is so important that children beginning school, and young people beginning their life's work, should start life unhampered by a defect which, if unremedied, will too often only become worse, that it is specially with such that this paper deals.

Frequently the first symptom which attracts the attention of the patient is headache, recurring persistently in spite of good general health, often coming on in the early morning and passing away about noon or soon after; varying in character from dull pressure to acute pain like that of neuralgia, and in situation from being frontal to being hemifacial or hemicranial.

The severity, as indeed the very presence of the pain, depends largely upon the state of general tone, the temperament of the patient, and the amount of eyework to be done.

The fact above mentioned, that the pain frequently begins in the early morning, often leads to the erroneous conclusion that the pain cannot be connected with the eyes, which have then had several hours of complete rest.

In some cases a dull pain is experienced in the eyes and across the brow during visual effort, which is often combined with a feeling of heat in the eyes and eyelids, and causes the person to lay aside the book or work for a few minutes to press gently with the fingers upon the aching eyes.

The patient often thinks that the eyes are simply tired, but such a feeling should not be experienced in health, even when the eyes are being very constantly used, and indicates that there is a defect somewhere; still, unless it is specially asked about, this feeling of tiredness is frequently not mentioned by the person complaining of headache.

Young men working constantly at a desk frequently experience a sensation of insecurity, in some cases amounting to giddiness and sickness, when they lift the head, and which is really due to eye-strain.

At other times there is complaint of temporary dimness of vision, of dark spots before the eyes, or of irritability of the eyes to light, which may be due to accommodative spasm or failure, to convergence defects, or to hyperæmia of the retina.

One is frequently informed that a child has been noticed either winking very frequently, holding the head to one side and close to the work, or even complaining that the blackboard at school cannot be seen. The parent, in such cases, generally puts all fears at rest by the assurance that it is merely a "bad habit" which has been contracted, yet such habits are very often the manifestation of eye-strain.

Purely local symptoms are more manifest, but are also too often mistaken for manifestations of a general and irremediable weakness which will "be grown out of."

Congestion of the margins of the eyelids, at times amounting to blepharitis, and accompanied by incrustation, the frequent occurrence of chalazia, hyperæmia of the conjunctiva, annual attacks of phlyctenular ophthalmia, &c., are all frequently due to uncorrected ametropia, and will hence be simply and effectually remedied and prevented by the accurate adjustment of glasses.

Alternating strabismus in childhood, which is too often thought to be due to imitation or habit, and which, if unattended to, is apt to become permanent, is usually due to want of balance of muscular power, and frequently may be checked by the use of suitable glasses; whilst later in life, when a squint has become permanent, it is well recognised that unless suitable spectacles are worn, an operation may not bring permanent benefit.

These facts, then, indicate the great importance of having the amount of accommodative strain properly adjusted to the convergence effort ordinarily associated with it in binocular vision.

But whilst it is evident that such signs as those above mentioned are troublesome and irritating, it is also true that the eye, which, although ametropic, may be perfectly healthy to begin with, may be damaged permanently by prolonged habitual abuse.

Although the existence of a special type of neuritis depending upon eye-strain for its existence need hardly be claimed here, yet it must have struck most observers as remarkable how frequently it is found that congestion of the optic nerves is associated with hypermetropia and astigmatism.

This congestion of the optic nerve and retina is the cause of the permanent damage of which remark has been made above, and it can hardly be doubted that the congestion itself is due primarily to chronic irritation acting reflexly, doubtless through the ciliary nerves, since in most cases rest and correction of existing ametropia will insure its relief.

As a result of many observations the writer has come to the conclusion that there is no very evident relationship between the amount or intensity of the neuritis and the amount of ametropia existing, as intense congestion of the optic nerve with even perivascular exudation may be seen in cases where asthenopia has been manifest, in spite of the fact that the ametropia is slight; and the converse also is true. It would rather seem as if the temperament of the patient had some influence, and certainly the occupation of the individual has a powerful influence in exciting such a neuritis.

Such hyperæmia of the optic nerve may be partial or general, and may be less or more intense, so that in some cases the change is only noticed at one part, whilst in others the whole nerve is deeper in colour than the surrounding retina. There is not usually much œdema of the nerve, but occasionally its outline may be lost more or less completely, and the vessels may be obliterated in parts. The central cup is not usually filled in, but in long-standing cases there is often some exudation at the sides and following the course of the vessels. This exudation takes the form of white lines, and is due to round-celled exudation into and round the vessel-sheath, as has been seen microscopically. As regards the prognosis, it may be said that this depends upon the appearances of the nerve and on the amount of solid exudation, as in other cases of neuritis.

In cases of simple, and not very intense, hyperæmia, a complete recovery is generally seen, but where there is much disturbance, some defect usually remains for years. Yet, if a patient will rest and use glasses, in most cases it may be said that the prognosis is good. In the case of seamen and railwaymen this symptom or result of eye-strain is often of very great importance. Such men may be either hypermetropic or astigmatic, and still, by effort, pass the eye tests for, say, second mate or fireman. After a number of years, however, the men come up for examination again, and are rejected on account of defective vision, because they have overworked the eyes and cannot, on account of this hyperæmia or neuritis, see the required amount. In such cases the men have had warning that their eyesight was not good, and have, through ignorance, neglected it, but happily a period of rest, combined with the use of spectacles, will frequently assist in the removal of the defect, although, like many other objectionable things, it takes much longer to go away than to come.

In another sense, however, neglect of the eyes may bring about a permanent, or almost permanent, loss of vision.

If for any reason, such as astigmatism of high degree or hypermetropia, an individual is unable to maintain the accommodative effort required in binocular vision, and allows one eye to deviate, the preceptive mechanism of the deviating eye may become sluggish in action, and ultimately cease to act altogether.

In such cases, only accurate correction of the ametropia, with careful training and stimulation, will bring the eye up to a comparatively good state.

These, then, and many other symptoms and signs of overwork of the eyes, may be warded off by care and foresight in having recourse to the expedient of Kirkpatrick, making "siccar."

In conclusion, the positive opinion may be expressed that even now much damage is done yearly to the eyesight of children and young people by the neglect of what should be a recognised duty, viz., to have a careful examination made of the eyes of all children who, by complaint or action, indicate that their visual powers are not perfectly healthy.

This opinion is expressed in full recognition of the fact that a much larger percentage of people are now aware of the dangers of neglect than was formerly the case; but whilst experience shows that many children are now being brought for advice, it also shows that had many of them been brought a few years earlier, much trouble might have been saved, and much disfigurement averted.

NOTES UPON A CASE IN WHICH PSYCHICAL INFLUENCE APPEARED TO AFFECT THE DEVELOPMENT OF ORGANIC DISEASE IN THE PRESENCE OF HEREDITY AND ENVIRONMENT.

BY J. AIKMAN, M.D., GUERNSEY,

AND

ALFRED WEBSTER, M.D., GLASGOW.

JOHN R. was born of healthy parents nineteen years since. He lived under conditions of comfort, and was surrounded by all that could compensate for a family history which included phthisis near at hand, and epilepsy more remotely.

In 1893 one case of acute phthisis occurred in a half sister. She was nursed and died in his home. A sister had hip-joint disease in 1894, which got well under treatment, without suppuration, and remains well.

In 1894 the patient developed chronic peritonitis, with much effusion. At the same time he had epileptiform attacks, marked nasal obstruction from adenoids, and venous stasis in the hands, feet, and face. Under treatment the peritoneal fluid disappeared, and in May, 1895, the case was referred to Dr. Ord, of St. Thomas' Hospital, London, who reported under date 4th June, 1895:—

"In the first place, he is ill developed, particularly in the chest; his ribs are somewhat beaded, and he has a lateral curvature of the spine to the left. His hands have the colour and coldness of Raynaud's disease. His mucous membranes are evidently not healthy, the gums being swollen and soft, the teeth badly formed, the tonsils enlarged, the posterior nares choked with adenoid vegetation, and the conjuntivæ congested. I could find no signs of mischief in the heart, lungs, or abdominal viscera. There was no ascites, so that the chronic peritonitis has clearly passed away, as your letter tells. The urine is normal. The attacks of which you speak appear to be epileptiform. There is, however, no aura, and no somnolence after them. Nor has he had falls. I should fear that there exists in the pia mater or arachnoid some condition like that which produced the peritoneal trouble. This may pass away as the other did. We cannot here forget the Raynaud. The boy's mother says that his face becomes dusky and blue at times."

This prognosis was justified by the history of subsequent years. There was no fresh exposure to tubercular infection in his home or immediate surroundings. During 1898 he was seen on 2nd May, and Easton's syrup prescribed. He was seen again on 9th and 16th May, and was then dismissed well. On 7th July he was seen and examined, and pronounced well.

On 31st March, 1899, he was on the pier with his brothers and sisters when the steamer arrived which brought in the shipwrecked survivors of the *Stella* disaster. Some of his intimate friends were among the lost. He was very much shocked and excited. When he got home that morning he went straight to his room, and his sister reported to his mother that he had had an attack such as she had never before seen in him. There was more somnolence and more alteration of mental character afterwards. Each day which followed brought fresh news of friends lost and families in mourning, and the gloom which overhung the whole island somewhat masked the significance of the post-epileptiform state in a hypochondrical lad. It was not until 17th April that the mother took real alarm, and Dr. Webster saw the lad in a genuine post-epileptic condition. He was then quite conscious and fully awake; his pulse full and bounding, 104 per minute; his face flushed, lips rather dusky; and his hands blue and cold. Pupils rather dilated, but regular, and responded to light. Auscultation and percussion of chest and heart normal. Bowels confined. Tongue coated with a brown fur.

18th April.—Patient in bed and cheerful. Temperature normal. Pulse full, but ill sustained. Left chest normal.

Indistinct mucous râle at right apex, and same condition of heart sounds. Heart rapid, with very soft prolonged murmur after second sound at base, conducted towards right apex. Bowels still confined. Tongue free. Aperient ordered.

19th April.—Saw patient with Dr. Webster. He has had no fresh attacks. Chest and heart sounds as described yesterday confirmed. Patient is very weak, and gets giddy if set up. He is inclined to vomit, but no actual sickness. Pupils large, but react to light. Temperature normal.

21st April.—No change since last note. No fresh attacks, but always a threatening when patient sits up. Pulse tracing taken. Bowels acted well. Tongue cleaner.

22nd April.—Patient found in post-epileptiform state; pupils widely dilated, but still act to light. There is no actual coma, but the patient is somewhat sleepy, though easily roused. Temperature, 97·8°. The ligne cerebrale appears easily, and persists. Left chest markedly crepitant, specially towards apex; right chest slightly crepitant at apex. The attacks have been fairly frequent during the day, but no convulsive twitching and no paralysis have been noted. A suspicion of tubercular meningitis was advanced.

23rd April.—Patient had several attacks in the night. He got up twice to go to stool. He was incoherent in his talk, and died in an attack at 6 A.M.

The *post-mortem* appearance, grouped in association with the history, may be recorded as follows:—There was no fluid in the peritoneal cavity, but the prevertebral glands were enlarged, hardened, and in section cretaceous, but they showed no signs of softening; they were obviously the seat of old tubercular deposit.

At the extreme apex of the right lung there was also evidence of past tubercular deposit in the form of a cretaceous mass immediately under the pleura, which was firmly adherent. The evidence of recent tubercle was a miliary deposit occupying the upper and middle lobes of the right lung, and was associated with fairly intense congestion. The apex of the left lung was markedly congested, but the tubercular causation was not visible to the naked eye.

During examination of the brain the most prominent feature was the large amount of fluid which escaped from the left lateral ventricle. Tubercular deposit was present in abundance, but it was miliary in character, and in no place aggregated into masses, nor was there any evidence of old tubercular deposit. The choroid plexus particularly, and the membranes and vessels at the base of the brain were studded all over with minute pellucid points. There was no effusion of lymph, and no matting around the nerves springing from the base.

The distension of the left lateral ventricle had led to marked disintegration of the white area posterior to the ventricle, which was reduced almost to a cyst, contained by little more than cortical substance.

There was no miliary deposit in any of the solid viscera.

The heart presented nothing in either its muscle or valvular structures calling for note.

Remarks.—The points of interest seem to us to formulate themselves somewhat as follows :—

1. The hereditary predisposition indicated by the condition of the mucous membranes of the nose and throat, the venous stasis, and the rachitis.

2. The occurrence of chronic peritonitis with effusion, and the evidence of tubercular causation in the condition of the prevertebral glands, this having followed exposure to tubercular infection, and having become a matter of past history.

3. The rapid development of tubercle in the chest and membranes of the brain following marked psychical impression, with death in the early stage of the lung lesion.

4. The rapid development of effusion in the membranes of the brain, and softening with slight tubercular deposit, and the association of this with adenoid vegetations. In view of Dr. St. Clair Thomson's researches on the escape of cerebro-spinal fluid by the nose (*Lancet*, 4th March, 1899, p. 577; *British Medical Journal*, 25th February, 1899, p. 488), this condition raises some curious questions—(*a*) Is it an acknowledged fact that nasal obstruction by adenoids influences the progress of tubercular meningitis? (*b*) if it does so, is the influence only that of mechanical obstruction, or does the infection spread upwards by the same channel by which the tension of cerebro-spinal fluid is relieved—the lymphatics which pass through the cribriform plate?

Obituary.

NORMAN KERR, M.D. GLAS., F.L.S.

DR. NORMAN KERR, who died at Hastings on 30th May, 1899, shortly after completing his sixty-fifth year, was born and educated in Glasgow. Before entering the University, where he graduated M.B. and C.M. in 1861, he worked for some years as a journalist on the staff of the *Mail.* He founded the University Total Abstinence Society, and was one of the founders of the City Hall Saturday Evening Concerts, which have done so much to promote music and a rational mode of spending the Saturday evenings among the working classes of Glasgow. Dr. Kerr settled at St. John's Wood in 1874, and was for almost a quarter of a century a parochial medical officer for St. Marylebone.

His lifework was, of course, on behalf of temperance, and he was one of the ablest and most devoted leaders the cause has ever had. He founded and was the first president of the Society for the Study and Cure of Inebriety. He was for many years chairman of the Inebriates Legislation Committee of the British Medical Association. He was an honorary member and corresponding secretary of the American Association for the Cure of Inebriates. The Act recently passed in this country may be regarded as largely a result of his efforts.

In addition to the multitude of contributions he made to British and American periodical literature, the following works which he published may be mentioned:—*The Action of Alcoholic Liquors in Health* (1876); *The Mortality from Intemperance* (1879); *Wines* (1882); *Stimulants in Workhouses* (1882); *Cholera and its Prevention* (1884); *The Truth about Alcohol* (1885); *Hydrophobia* (1886); *Some Risks of Attention to Health and Sanitation* (1888); *Inebriety: its Etiology, Pathology, Treatment, and Jurisprudence* (third edition, 1894); *Hypnotism Not a Safe and Reliable Remedy* (1890); *Inebriety and Criminal Responsibility* (1891); *Probationary Curative Treatment of the Alleged Insane* (1894).

J. G. SINCLAIR COGHILL, M.D., F.R.C.P. EDIN., M.R.C.P. LOND.

DR. SINCLAIR COGHILL, who died on 5th June from perforating ulcer of the stomach, had a slight connection with Glasgow, since he acted for three years as demonstrator of anatomy in the University under Professor Allen Thomson. Dr. Coghill, who was born at Caithness in 1834, and educated in Edinburgh, had an adventurous career, whose scene lay in very different parts of the globe; but his best work, there can be little doubt, was that which was carried on during the last score of years, while he was physician to the Ventnor Hospital for Consumption, with which his name is so closely associated.

WILLIAM MACGILL, M.D.

DR. MACGILL was a native of Port William, in Wigtownshire, and graduated M.D. in Glasgow University in 1867. He became L.R.C.P. Edin. in 1859, and F.F.P.S. Glasg. in 1863. He had obtained the Licence of the Faculty in 1848. He read a paper, entitled "Remarks on the Sanitary Condition of the City of Glasgow," to the Social Science Association in 1860. Dr. MacGill was for over forty years physician to the Glasgow Police Force, an appointment from which he retired on a pension in 1896. He died on 17th June, in his eighty-second year. He had no family, and his wife predeceased him.

CURRENT TOPICS.

ROYAL INFIRMARY APPOINTMENTS.—At a meeting of the Managers held on Thursday, 1st June, Dr. T. K. Monro was elected one of the Physicians to the House, in room of Dr. Alexander Robertson retired. A vacancy therefore occurs at the Dispensary. The other medical officers were reappointed.

GLASGOW CENTRAL DISPENSARY.—Dr. Frank Charteris has been appointed Extra Dispensary Physician in succession to Dr. H. Hyslop Thomson.

BACTERIOLOGIST TO THE CORPORATION.—The Corporation are about to appoint a bacteriologist, who is to devote all his time to the duties of the office at a salary of £350 per annum. It was explained in the Town Council that the new official would occupy a position in relation to the medical officer of health similar to that now occupied by the physician-superintendent of the Fever Hospitals.

MERRYFLATTS HOSPITAL EXTENSION.—The recent extension of the Govan Parish Council's hospital at Merryflatts was formally opened on 15th June by Mr. James Henderson, chairman of the Council. The new block extends westwards from the old building, which has now been open for twenty-seven years. The modern heating and ventilating systems of the new hospital have been extended to the old building without interfering with the full occupation of the latter by the patients. The cost to the parish of the extension and improvements amounts to about £20,000.

THE FINAL EXAMINATIONS in medicine at the University extended from 29th May to 21st June, the results being announced on 22nd June. There were 101 candidates altogether—24 for M.B., C.M., and 77 for M.B., Ch.B. The latter number included 11 women. As might be anticipated in the case of those who went in under the old regulations, the courage of the candidates was not always sufficient, even for the written examinations. The following is the official pass-list:—

A. For M.B., C.M.—George Henry Beck Harvie, Alexander Page Robertson, Alexander Waugh.

B. For M.B., Ch.B.—James Napier Baxter, Auguste Boyes, William Broad, Andrew Brownlie, James Robert Chalmers, David Maclure Cowan, John Craig, George Morris Crawford, William Crerar, John Cullen, Charles Cheven Cumming, Sarah Davidson, John Lithgow Davie, James Austin Dickie, Hugh Campbell Ferguson, James Fulton Findlay, George Gardner, John Gardner, Hyam Goodman, M.A.; Jessie Downie Granger, James Garden Green, Andrew Kerr, Andrew Love, Ramsay Millar, Hugh Miller, Norman M'Leod Miller, Ebenezer Mitchell, M.A.; James Hogg MacDonald, John M'Gilchrist, Norman Forbes MacLeod, William Johnston Maclure, John M'Millan, Ina Lochhead M'Neill, John Patton, Thomas Stephens Picken, John Reid (Lanark), William Alexander Riddell, Arthur Robin, Catherine Love Smith, David James Smith, William Stewart Stalker, Alfred George Stewart, Frederic Richardson Stewart, M.A.; Charles Pinkerton Thomson, William Brown Thomson, Henry Nisbet Turner, Edythe Marjorie Stewart Walker, Alexander Laurie Watson, M.A.; Alexander Simpson Wells, M.A.; Sara Whiteford, Robert Orr Whyte, M.A.; William Wright, John Doctor Young.

The following candidates attained distinction in the subjects indicated:—[1]

James Robert Chalmers (P, M), John Craig (P), Hugh Campbell Ferguson (S, M), George Gardner (M), John Gardner (S, P, M), Jessie Downie Granger (P, M), Jessie Sophia Beatrix Hunter (M), Hugh Miller (M), Norman M'Leod Miller (M), Ebenezer Mitchell, M.A. (P, M), James Hogg MacDonald (P, M), Peter M'Fadyen (M), William Alexander Riddell (M), Arthur Robin (M), Alfred George Stewart (P), William Brown Thomson (P), Edythe Marjorie Stewart Walker (P), Alexander Laurie Watson, M.A. (S, P, M), Alexander Simpson Wells, M.A. (S, P).

EDINBURGH UNIVERSITY: APPOINTMENT OF PROFESSOR OF PHYSIOLOGY.—At a full meeting of the Curators on 16th June, Mr. Edward Albert Schäfer, M.R.C.S., LL.D., F.R.S., Jodrell Professor of Physiology in University College, London, was appointed to the chair rendered vacant by the death of Professor Rutherford. The University of Edinburgh is to be congratulated on having added to its teaching staff one whose reputation as a teacher and investigator is so pre-eminent as that of Professor Schäfer.

GENERAL MEDICAL COUNCIL.—The principal item of local interest in connection with the recent meeting of the General Medical Council was the emphasising of the fact that the Council has no power of supervising the examinations for additional registrable qualifications. This was brought out in connection with a complaint made by two Fellows of the Faculty of Physicians and Surgeons of Glasgow.

DURING the session of the General Medical Council, Sir William Gairdner's place at the professional examinations in medicine at the University was taken by two of the recently appointed medical professors.

THE "BRITISH PHARMACOPŒIA" OF 1898.—The *Pharmacopœia* Committee have reported to the General Medical Council that of 26,500 copies printed, only 1,275 now remain. The Finance Committee are able to report a surplus, which is chiefly due to the sale of the book. The *British Pharmacopœia* has been adopted as official by the legislatures of Queensland and Victoria.

---

[1] S, surgery and clinical surgery; P, practice of medicine and clinical medicine; M, midwifery.

DEATH OF THE "INDEX MEDICUS."—Those who have had occasion to undertake extensive researches in medical literature will learn with genuine regret that this periodical is dead. Only a few years ago, it was revivified after being for some months in a state of suspended animation (what was lost being eventually recovered), but apparently there is no hope now that it can ever come to life again. The undertaking was a huge one, and the expense of carrying it on has proved too great, although the vast editorial labour was all given gratuitously.

NEW DRUGS AND PREPARATIONS.—*Phenalgin* (Etna Chemical Co., New York; E. J. Reid, London) is a white powder, which is said to be a synthetic coal-tar product. It is claimed as antipyretic, antimalarial, hypnotic, and stimulant. The dose is 2½ to 10 grains, repeated in half an hour, if necessary,

Vasogen (Vasogenfabrik Pearson & Co., Limited, Hamburg; E. J. Reid, London) is said to be an excellent vehicle for medicaments which are intended to be absorbed through the skin. It is also claimed as a good solvent for iodine, iodoform, creasote, guaiacol, &c. *Mercury vasogen ointment* is a special preparation made in strengths of 33⅓ and 50 per cent. *Iodine vasogen* may be given internally.

MEETINGS OF SOCIETIES.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1898-99.

MEETING XII.—19TH APRIL, 1899.

The President, DR. MALCOLM BLACK, *in the Chair.*

DEMONSTRATION OF CASES.

BY DR. D. N. KNOX.

The reports of several of the cases will be found as an original article at p. 1.

MEETING XIII.—3RD MAY, 1899.

The President, DR. MALCOLM BLACK, *in the Chair.*

I.—THE PATHOLOGY OF PHTHISIS, PAST AND PRESENT.

BY DR. DAVID YOUNG.

The definition of consumption was now a very different thing from what had been taught in his student days. Heredity, which had played a most important part in the causation, was now relegated to quite a secondary position. There is no direct hereditary transmission of phthisis. Transmission of a predisposition is acknowledged: it may be a local weakness in the lungs themselves, or it may be transmission of diminished power of resistance in the defensive cells of the body. Obviously the difference between predisposition and heredity is not merely nominal. A predisposition to phthisis may be acquired according to occupation and manner of life. Partial immunity, also, may be conferred. Infectivity of phthisis is not now denied. In a house in the East End of Glasgow three families successively lost members by death from tubercular disease of lungs. The first family lost one, and continued in good health since leaving the house; in the second, the mother and two children died; and in the third, the mother and two sons, aged 18 and 20. In one of these families, before occupying the house in question, an infant had died of tubercular meningitis. But that was not sufficient to exclude the probability of that house being considered a house infected with tuberculosis. The third family had always been healthy before going to live in that house. Consumption should in time come to be one of the rarest of diseases.

The paper further contained a complete review of the latest pathological knowledge of phthisis, and a historical sketch of the subject from the days of Aristotle, when the infective power of tuberculosis was believed in, to those of Koch, when the infection was actually proved.

Dr. J. W. Findlay pointed out how the caseous necrosis which occurs in the lungs must be attributed to the toxic products which the bacilli excrete. The so-called giant cells are a repetition of the initial stage of caseous necrosis; the peripherally arranged nuclei are the healthy endothelial cells; the branching of the giant cells is the caseous degeneration. He doubted if tubercle could be formed in the proper cells of the kidney or liver. The tubercle bacillus can live anywhere, and multiply in any situation; it was not confined to the body itself.

Dr. Black narrated the case of a family where he had no doubt whatever that the infection had been communicated from one member of it to another. There was no history of tubercular disease on either side. First one daughter died, then another who had nursed her sister, and so on the tale went, till now there is only one left of a large family. The saving point in the case of the survivor was that she had an out-door occupation.

II.—STAINING SPUTUM FOR THE TUBERCLE BACILLUS.

By Dr. John Knight.

Dr. Knight gave a demonstration of the methods adopted in staining sputum for the tubercle bacillus by means of carbolfuchsin and methylblue.

Meeting XIV.—17th May, 1899.

The President, Dr. Malcolm Black, *in the Chair.*

SOME CASES OF MULTIPLE NEURITIS WITH MENTAL SYMPTOMS.

By Dr. Oswald.

Dr. Oswald read a paper on some cases of multiple neuritis with mental symptoms. He directed attention to the fact that little notice had been taken of those symptoms by writers, and endeavoured by the cases he detailed to show that they presented two distinct classes of symptoms—viz., those due to the action of the poison on the brain setting up neuritis, and those due to the influence of neuritis on the mental centres. He claimed an intimate connection between the neuritis and the mental condition. The cases he had had under his care had certain points in common. The subjects of all were women; they had all mental symptoms; the cause of neuritis in all the cases was alcohol; and in all there was an hereditary predisposition to insanity or crime. In all syphilis as a factor could be excluded, and all ended in recovery. As somewhat unusual symptoms, he mentioned the interference in two cases with the functions of the bladder and rectum, and the presence of nystagmus. He laid considerable stress on the symptoms due to the action of the alcohol on the peripheral nerves causing neuritis, and giving rise to hallucinations and perverted sensations; and these symptoms he believed to be dependent on altered nerve conditions. In addition to the cases in which the neuritis was caused by alcohol, he mentioned one caused by syphilis, and two in which the neuritis was closely associated with epileptic manifestations.

Dr. Alex. Robertson said that it must be difficult to give a positive opinion as to how far the neuritis determined the condition of mind involvement, because there was an agent —alcohol—acting generally in the system. The excitement of the brain as a sensory centre, and the disorder produced, might be largely referred to the periphery, because it is a law that irritation of nerve at its centre, or in its course, is frequently referred to its periphery. He had sympathy with the view expressed, that the irritation of the peripheral nerves will tell upon the great cortical centres; and the mind, working in connection with the cortex, being irritated by impressions coming from below, delusions and hallucinations will have colouring given them by these peripheral impressions.

Two of the cases showed that the spinal cord might be involved. He was not prepared to commit himself to the conclusion arrived at by the writer of the paper. For instance, the aura of epilepsy, starting in the arm or leg, has had its origin in a lesion of the cortex of the brain, showing that irritation was actually referred to the periphery.

Other poisons besides alcohol had a similar influence. Lead has produced a general peripheral neuritis with insanity—delusions of suspicion, hearing of imaginary voices. This patient heard the voices only in one ear; that possibly indicated that a particle of lead was deposited in the auditory centre of that side, and that the irritation was reflected outwards.

Dr. J. W. Findlay pointed out that the cases referred to were all recoverable cases. He found that alcoholic patients with peripheral symptoms almost invariably recovered, or, at least, the prognosis was better than in those where the higher sensorium was involved—a fact which is rather opposed to the argument that the mental condition is due to the peripheral neuritis, and not to the alcohol.

Dr. D. C. M'Vail said that Dr. Oswald had no pathology to offer in support of his argument. He understood that in these cases narrated the brain was really in a normal condition histologically. Dr. Oswald's contention amounted to this, that given peripheral neuritis in a patient of no insane family history these mental conditions will not appear; but if the person is of insane descent, then these brain symptoms will manifest themselves.

We know the pathology of peripheral neuritis. Was it possible that alcohol, which could produce these peripheral nerve changes, was not capable of producing similar changes in the brain tissue? He did not think so. Alcoholic peripheral neuritis practically always recovered under treatment. It would be interesting to know whether in these cases of peripheral neuritis with mind involvement recovery will take place.

Dr. Oswald, in reply, said that he divided the symptoms into two classes—(1) those due to the action of the poison on the brain primarily; (2) those due to the action of the poison on the nervous system acting on the brain secondarily. In patients with hereditary brain instability you will have brain symptoms following upon a neuritis, these symptoms being perverted sensations or hallucinations.

REVIEWS.

A Practical Treatise on Fractures and Dislocations. By LEWIS A. STIMSON, B.A., M.D. London: Henry Kimpton. 1899.

PROFESSOR STIMSON'S work on fractures published in 1883, and that on dislocations which appeared five years later, are well known and generally accepted. In the present work he has to some extent made use of the substance of those volumes, but has introduced so much new material, and rewritten so much of the old, that it is in all essentials a new production. A novel feature of the book is the introduction of twenty full-page plates of skiagrams of fractures and dislocations. But while thus anxious to be up with the times in the matter of making use of the *x* rays, the author acknowledges to some disappointment as to the results obtained. He says in the preface, "Shortly after the discovery of the *x* rays an apparatus for their utilization was set up in this hospital, and some of the results are shown in the skiagrams introduced as plates. In studying these photographs it must be remembered that they are reproductions of shadows, not, like ordinary photographs, of the appearance of the illuminated surfaces, and that the apparent modelling of the bones is inexact, because it is due to differences in thickness and opacity to rays. While the *x* rays have been of interest and value in showing details of certain fractures, especially at the wrist, elbow, and ankle, yet it cannot fairly be said that they have yielded much information of practical value which could not have been obtained by palpation. Probably their usefulness will be increased by improvements in methods and apparatus, but at present the information needs to be sifted with great care from among many misleading appearances." There is much sound sense as well as abundant caution in this statement, but the author does not take note of the value of the *x* rays as a means of making a fracture evident to the unskilled, such, for instance, as the judge and jury in a trial for damages. Further, we believe the method to be of much value (1) in confirming the results obtained by palpation; (2) in serving to distinguish fractures in the neighbourhood of, or through, joints from dislocations; (3) in distinguishing fracture from diastasis; and (4) in satisfying the surgeon as to the success of his manipulations and apparatus in reducing the displacement, and keeping it reduced.

We turn with much interest to the section on congenital dislocation of the hip, and find that subject fully treated. Dr. Stimson discusses the etiology very thoroughly, giving Krönlein's classification of the various theories, and coming to the inevitable conclusion that "congenital dislocation of the hip is due in most cases—and these should be regarded as typical—to a defect of formation or development." Going a step further, he holds that "the cause is to be found exclusively in arrest of development of the acetabulum by deficient action or vitality of the cells of the Y cartilage." In regard to treatment, he speaks with much caution as to the advisability of operative procedure, pointing out that the methods of Hoffa and Lorenz have been followed by a considerable mortality, and the results have not often been much to boast of. As the mortality, however, is chiefly due to sepsis, it is to be expected that as our methods improve better results will be secured with less risk, and the condition is certainly one that it should not be beyond the reach of surgery to correct.

On a general survey of the work before us we are struck with the evidences on every page of patient research and accurate observation. The work of another Transatlantic author has long been the standard work of reference on fractures and dislocations, namely, that of Dr. Frank Hamilton, and it is no small praise to say (as we can honestly do) that not only is Dr. Stimson's book worthy to be placed alongside of Hamilton's, but that it is destined largely to supersede it, as representing conclusions based on wider and more recent work.

The book we regard as least satisfactory in respect to the treatment of the several fractures. The descriptions of apparatus are anything but clear, and the illustrations showing their application are often anything but good. The woodcut of Carr's splint (not so named herein) shows a clumsy and heavy production, which would do discredit even to the pages of Scultetus. The criticism on Hamilton's double splint for fractures of the femur in children—that it is difficult to prevent shortening and angular displacement—is not justified by our own experience. We know of no splint so satisfactory in regard to cleanliness, comfort, and perfection of result, but in all cases care must be taken that it is adapted to the size of the child. It certainly has in our hands given better results than the vertical suspension which Dr. Stimson so much lauds.

We are pleased to find that the author has discarded the rectangular splint (and, indeed, all apparatus) in cases of fracture of the surgical neck of the humerus. That has been our own practice and teaching for about twenty years, and we are satisfied that the chest wall makes the best and only splint required, excepting in cases where there is great abduction of of the upper fragment.

The book is clearly printed and handsomely bound, and in every respect worthily upholds the credit of our Transatlantic brethren.

Clinical Lectures on Neurasthenia. By THOMAS D. SAVILL, M.D. London: Henry J. Glaisher. 1899.

IN publishing these lectures the author had three praiseworthy objects in view:—(1) To call attention to the immense wealth of clinical material, especially for the study of mental and nervous diseases, in the metropolitan workhouses and infirmaries; (2) to show that functional diseases of the nervous system are by no means so incurable as is often thought; and (3) to claim for the subject of neurasthenia a greater amount of attention than has hitherto been accorded it by the medical profession.

The first of the five lectures was delivered at the Paddington Infirmary in 1891, advantage being taken of the opportunity to show how valuable a field for clinical teaching and research is presented by a poor-law infirmary. The lecture further deals with the pathology of functional nervous diseases. The second lecture is on "Nervousness and Neurasthenia," and discusses the symptomatology, course, prognosis, diagnosis, etiology, and treatment of this condition. In the third lecture there is a table showing the differential diagnosis of neurasthenia, hysteria, and hypochondriasis. With regard to this, one comment may be made. Among the features described as characterising neurasthenia are these: "inattention, memory deficient, no introspection;" whereas the "introspective habit" is said to be a leading element in hypochondriasis. The fact is, however, that in neurasthenia there may be a great deal of introspection of a kind. The power of fixing the attention on external objects is diminished owing to the exhaustion and degradation of the very highest centres. The natural accompaniment of this is over-action of slightly lower centres, including those which subserve such functions as imagination. The patient's fancy wanders at large even though he does not wish it to do so, but he is strongly tempted to encourage it. Now, the weakness of will, the loss of memory, the inability to fix the attention, as well as other symptoms, are constantly obtruding themselves on the sufferer, so that, even though he is most eager to do so, he cannot banish these subjective conditions from his thoughts. One of the most hopeful elements in the prognosis presents itself when the patient begins to take an interest in external things.

In the third lecture the pathology of neurasthenia is also considered. Dr. Savill attributes great importance to dyspepsia as one of the causes; he thinks that abnormal products of digestion absorbed into the circulation lead to neurasthenia by their toxic effects upon the nervous system.

In the next lecture the subject of pathology is continued, and treatment is discussed in more detail than in Lecture II. The therapeutic measures recommended are, in the main, excellent, but we doubt if a glass of toddy at night will "often" be found advisable (p. 91). The author is correct in saying that isolation is not desirable. We believe that one of the things most to be desired, though it may be most difficult of attainment in such cases, is to get the patient interested in a hobby which will occupy a limited portion of his time every day.

Lecture V treats of the mental symptoms of neurasthenia and neurasthenic insanity. It includes a classification of mental disorders, and a table showing the differential diagnosis of cerebral neurasthenia, neurasthenic insanity, and true insanity. After the lectures there is a short chapter by Miss Agnes Blackadder, M.B., summarising the views of different authors on the nature of neurasthenia. The work closes with a bibliography and an index.

The earlier portions of the work are the most interesting to us, but it is exactly these parts which, so far as we have observed, are specially marred by one blot, namely, gross carelessness in the use of our mother-tongue. We get a foretaste of this in the preface, which, though little more than a page in length, contains such an expression as the following: —"these lectures do not aim to being anything more than," &c. In the text we find "every kind of mental and bodily ailment that flesh is heir to" (p. 2); "to study the slow beginnings of disease, and such ailments as migraine, neuralgia, ... arterial sclerosis, and a large number of epileptics" (p. 3); "seized with apoplexy, hemiplegia, anterior poliomyelitis, the later stages of cerebral tumour," &c. (pp. 3-4); "anatomy and pathology is" (p. 8); "clinical observation at the bedside" (p. 11); "either naked-eye or by means of the microscope" (p. 11); "by applying the method of analogy, and grouping numbers of cases together, I have long believed" (p. 12). These mistakes, it will be observed, occur within the first dozen pages. Though we have noted quite a number of similar faults in later parts of the work, these in the first lecture are particularly inexcusable, since the author has had seven or eight years in which the work of revision might have been carried out. In other respects the volume is a creditable piece of work.

Albuminuria and Bright's Disease. By NESTOR TIRARD, M.D., F.R.C.P. London: Smith, Elder & Co. 1899.

ALBUMINURIA is a subject which has always had a special attraction for the physician, not only on account of the great scope it gives for the exercise of his diagnostic and prognostic skill, but also because its study involves a consideration of many points still in dispute. And so a new work on this subject, when written by an author of the standing of Dr. Tirard, cannot but be regarded as a welcome addition to our current literature.

The book begins with a general survey of all the conditions where albumen is found present in the urine, and Dr. Tirard divides these into two groups, the first comprising the cases where the albumen has an extra-renal origin, the second where this origin is intra-renal. The second group is then subdivided according as there is, or is not, any structural change in the kidneys themselves. These different causes of albumen in the urine are next discussed in some detail, special chapters being given to acute nephritis, scarlatinal nephritis, chronic nephritis (large white kidney and contracting kidney), and interstitial nephritis (cirrhosis of the kidney). A chapter is likewise devoted to uræmia and the various theories advanced to explain its phenomena. The retinal changes in Bright's disease are fully described, as also the general diagnosis and prognosis of albumen in the urine. The book, indeed, deals with the whole subject of albuminuria in a very complete and thorough manner.

As a clinical study, then, setting forth the author's observations and experience, this is a very excellent work; but otherwise it is doubtful if it adds much to our knowledge of diseases of the kidneys.

The book is amply illustrated and well printed, and it is written in a style which, if not elegant, is at all times perfectly clear. We have much pleasure in recommending it to our readers.

Manual of Bacteriology. By ROBERT MUIR, M.A., M.D., F.R.C.P. Ed., and JAMES RITCHIE, M.A., M.D., B.Sc. Second Edition. Edinburgh and London: Young J. Pentland. 1899.

THIS is undoubtedly one of the best manuals of bacteriology before the medical profession at the present time. In its thorough treatment of the subject of the various pathogenic micro-organisms it still stands unique, and for this reason is especially valuable to all who are interested in the study of bacteria and their products. On the other hand, the chapter in which the various fungi are described is so limited in character that it might very well have been omitted. If, instead, a chapter had been devoted to a short *résumé* of the characteristics of the more common non-pathogenic germs, we consider that the work could then be called with greater accuracy a "manual of bacteriology."

Amongst the more important additions are descriptions of the following germs:—Diplococcus intracellularis meningitidis, bacillus enteritidis, smegma bacillus, and the psittacosis bacillus. Neisser's differential method for staining the diphtheria bacillus, and Pitfield's method of flagella staining as modified by Muir, have also been added. Other new subjects treated are the standardization of reactions of media. bacterial fermentation in sugars, permanent preservation of cultures, and the testing of agglutinative and sedimentary properties of serum.

In the chapter on immunity many changes have been made, and the authors have given an unusually clear and concise exposition of this difficult subject. Whether, however, they are justified in according the place of honour to the recently elaborated theory of chemical action between toxines and their antitoxines is another question. If there be a true neutralisation, what is the explanation of the fact that when a certain toxine and its antitoxine are mixed together in proper proportions, and the mixture is heated to 70°, the antidote is found to have been destroyed, whilst the toxine still remains? Again, the long series of experiments conducted by Buchner on mice and guinea-pigs with mixtures of toxines and their antitoxines would, assuming this theory to be the true one, be almost as difficult to explain.

Theóretical considerations aside, however, there can be no doubt as to the general excellence of this work. As this second edition has been considerably enlarged, not only in the subject matter but also by the addition of some eighteen new illustrations, it certainly merits a still greater popularity amongst all classes of medical men.

Materia Medica and Therapeutics. By J. MITCHELL BRUCE. New Edition. London: Cassell & Co., Limited. 1899.

THIS text-book, since it was first issued in April, 1884, has been many times reprinted and many times revised. It has now reached its thirty-eighth thousand. This of itself is sufficient to show the estimate that has been formed of its value. This new edition, enlarged on account of the introduction of new material, has been revised according to the new *British Pharmacopœia.* The original plan of the book has been adhered to, and we note that although the *Pharmacopœia* has dispensed with much of the detail with regard to the manufacture of chemical substances, the author still retains it. To have omitted it, however, would have destroyed the plan on which the inorganic substances and their preparations are arranged.

This suggests to us the question whether or not this arrangement is best. Again, in the case of the vegetable drugs, which are arranged according to the natural orders from which they are derived, it seems a much more useful plan to have them grouped according to their pharmacological and therapeutic properties. The student must do this ultimately, so that there is much to be said for this arrangement being adopted in the case of the vegetable drugs at least, though it may be impossible in the case of inorganic substances for very obvious reasons.

We have, however, in the latter part of the book, namely, that which deals with general pharmacology and therapeutics, all the important medicines discussed in relation to their action on particular systems of the body. This portion of the book, therefore, supplies to some extent what is lost in the plan adopted under special therapeutics. Still, for the beginner who wants the materia medica with the pharmacology of the individual drugs, this latter part of the book is too advanced. It requires too general a knowledge of materia medica.

It seems, therefore, that while the student at the onset is not able to make much use of the general part of the book, he would be better to study drugs together which have similarity in their action rather than study together those derived from the same botanical order. The arrangement adopted seems to us to a certain extent to increase the difficulties of the student. The text-book, however, is one of the best and most reliable for students we possess, and it deserves all its success.

The Students' Practical Materia Medica. By GRACE HAXTON GIFFEN, L.R.C.P. & S.E. Second Edition. Edinburgh: E. & S. Livingstone. 1899.

THIS is a small manual for the use of students, the first part of which is devoted to a classification of the official preparations. The classification is of the simplest kind, and practically amounts to an enumeration of the preparations with their doses, and, where necessary, their strengths. The ingredients of the complex preparations are only occasionally given. The second part is devoted to the crude drugs arranged according to the part of the plant from which they are derived, *e.g.*, leaves, roots, seeds, &c. In each case some distinguishing feature is indicated, but there is no lengthened description and no preparations given. Animal products are treated shortly in a similar way. Then comes a tabulation of the inorganic salts, with some important character noted. At the end of the book there are a few tests of the more important official substances given.

If the book were used judiciously it might prove of some assistance to the student, but the danger would be that he might rely too much on it to the exclusion of his text-book.

The Essentials of Chemical Physiology, for the Use of Students. By W. D. HALLIBURTON, M.D., F.R.S. Third Edition. London: Longmans, Green & Co. 1899.

THIS is an excellent manual for the practical class. It consists of an elementary course containing twelve lessons, and an advanced course of fourteen lessons. Each elementary lesson is followed by a systematic description of the substances studied. There are 77 illustrations; an introduction containing numerous data of importance to the practical student; an appendix in which various instruments, such as hæmoglobinometers, polarimeters, &c., are described; and a good index. We heartily recommend the book.

The Diseases of the Stomach. By WILLIAM W. VAN VALZAH, A.M., M.D., and J. DOUGLAS NISBET, A.B., M.D. Illustrated. London: The Rebman Publishing Co., Limited. 1899.

THIS work is arranged in six sections, of which the first is introductory and only a few pages in length. The second is concerned with diagnosis in its various aspects. Section III is on medication, and includes the subjects of digestive hygiene, diet, and treatment under the various headings of physical, symptomatic, physiological, bacteriological, and chemical. Section IV treats of the dynamic or functional affections of the stomach; these include sensory (*e.g.*, bulimia, anorexia nervosa, &c.), secretory (*e.g.*, hyperchlorhydria), and motor neuroses (*e.g.*, gastrospasm, merycism, &c.), besides gastric neurasthenia and myasthenia. In Section V we have the anatomical diseases of the stomach, such as inflammation, ulcers, growths, displacements and obstruction of orifices. Section VI includes two chapters on the vicious circles of the stomach, the one treating of the condition of other organs when the stomach is diseased, and the other describing the secondary diseases of the stomach.

The work is an elaborate one of 650 pages, but these are not too large, and the printing is good. The authors obviously know their subject well, and practitioners who wish to make a special study of gastric diseases will, we believe, find this treatise to be one of their best available guides. It is a melancholy reflection on the transitoriness of things medical that Ewald's test for the motor efficiency of the stomach is, as we learn here, crude and almost worthless.

The Nurse's Clinical Case Book, with Daily and Four-hourly Temperature Charts. London: John Bale, Sons & Danielsson, Limited. 1899.

THE plan of this case book for nurses is in many respects an excellent one. Practically, however, in the majority of diseases its use is too limited. The book should be extended so that it could be used for the same length of time as the daily temperature chart which it contains—*i.e.*, for three weeks and a half—instead of for two weeks only. This could easily be done by utilising every fourth page which is at present left blank. If an additional four-hours' chart were added, its usefulness would be greatly enhanced, and it should then prove much more acceptable than in its present form.

The Polyclinic, being the Journal of the Medical Graduates' College, London. Vol. I, No. 1, May, 1899. London: H. K. Lewis.

THE first number of this new magazine is naturally to a large extent introductory. After the table of contents we find a list of the office-bearers, and we are confident no more capable person could have been selected for the offices of Secretary to the Committees and Editor of the *Journal* than Dr. C. O. Hawthorne, so long and so favourably known to our readers. Dr. Hawthorne is also Medical Superintendent of the College, and communications should be addressed to him at the Medical Graduates' College, 22 Chenies Street, London, W.C.

The *Journal* contains an article by Sir Wm. H. Broadbent on "The Necessity for a Medical Graduates' College;" an "Account of the Formation and Aims of the College," by Mr.

Jonathan Hutchinson; and a paper by Dr. Wm. Miller Ord on "The Medical Practitioner as a Student." After this we have an interesting series of "College Notes," at the outset of which we are told that the number of medical practitioners who have already joined the College as original subscribers is upwards of 450. The rest of the number is mainly taken up with details as to the various courses of instruction to be given at the Polyclinic. The present issue contains thirty-six pages, and is published at sixpence.

Descriptive Catalogue of the Anatomical and Pathological Specimens in the Museum of the Royal College of Surgeons of Edinburgh. By CHARLES W. CATHCART. Vol. II: Diseases of the Skin, Nervous System, Eye, Alimentary Canal, and Urinary Organs. Edinburgh: James Thin. 1899.

MR. CATHCART is to be congratulated upon the energy with which he is carrying through his great and useful work of preparing a catalogue of the Pathological Museum of the Royal College of Surgeons. The second volume is a bulky book, and cannot, from the minuteness of its descriptions, fail to be of the greatest service not only to those visiting the museum, but also as a work of reference.

Year-Book of the Scientific and Learned Societies of Great Britain and Ireland: comprising Lists of the Papers read during 1898 before Societies engaged in Fourteen Departments of Research, with the Names of their Authors. Compiled from official sources. Sixteenth Annual Issue. London: Charles Griffin & Co., Limited. 1899.

THE first issue of this valuable publication appeared in 1884, and gave an account of the history, organisation, and conditions of membership of the various societies. Copies of that, as well as of later issues, can still be had from the publishers. The present volume describes the scientific work done by these societies, and by others more recently founded, during the past year. The names of the societies that have furnished no information appear in the index only. We notice that twenty Glasgow societies are mentioned in this volume. We have much pleasure in commending the work to all who officially or otherwise are interested in scientific pursuits. Each annual volume costs seven shillings and sixpence.

The American Year-book of Medicine and Surgery, being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, &c. Collected and arranged, with critical editorial comments, under the general editorial charge of GEORGE M. GOULD, M.D. Illustrated. London: The Rebman Publishing Co., Limited. 1899.

IT is impossible in any short space to do justice to this volume of more than 1,100 pages. There are twenty-eight contributors or editors besides Dr. Gould himself, and the subject-matter is arranged under eighteen headings. The work is a huge storehouse of recent information of a practical kind on medical subjects, and the busy practitioner who wishes to be up to date in any or every branch of professional knowledge cannot do better than keep this volume beside him for constant reference.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

NERVOUS DISEASES AND INSANITY.

BY DR. R. S. STEWART.

Methodical Percussion of the Cranium. By Gilles de la Tourette and Chipault (*Le Progrès Médical*, 1st April, 1899).—These observers believe that it is possible to determine the thickness of the cranial wall by means of systematic percussion of the skull with the aid of a small hammer, or, preferably, directly with the finger. The percussion ought always to be practised with the mouth closed, the closing or opening of the mouth being susceptible in a large measure of causing variations in the results obtained, and the researches ought to be made on the living subject, the cranium of the cadaver giving a totally different sound. The comparative tonality of the cranium is clear in the infant, dull in the adult, more so in the male, less dull in the aged. It is clearer in the frontal and parietal regions than in the occipital; in other words, it varies with the thickness of the wall, being clearer where the wall is thicker, and inversely. The continuity or discontinuity of the wall exercises a very distinct influence on the sound. In two cases of trepanning it was found that the sound was clearer on the side operated on; and in two cases of old fracture, with loss of bone, percussion gave a veritable cracked-pot sound.

Spasmodic Paraplegia with Organic Lesion and without Degeneration of the Pyramidal Tract. By Babinski (*Le Progrès Médical*, 1st April, 1899).—Of the three cases of paraplegia without pyramidal degeneration one was affected with sarcoma of the choroid plexus of the second ventricle, another with sarcoma of the upper dorsal region, and the third with insular sclerosis.

Trional in Epilepsy. By Maunier (*Le Progrès Médical*, 29th April, 1899).—The cases observed are divided into three groups:—(1) Those in which trional causes suppression of the seizures; (2) those in which it suppresses the psychical troubles, excitement and epileptic furor; (3) those in which it modifies the seizures and the consecutive excitement. The dose varies from ½ to 3 grammes given in hot tea, or hypodermically, dissolved in ether, alcohol, or glycerine. In one case typical of the first group the seizures, preceded by a motor aura, were suspended; in another belonging to the second group the epileptic furor which had been a marked feature during treatment by bromide remained in abeyance for a year; and in one belonging to the third group the seizures and the excitement were alike suspended. There was a reduction in the number of seizures recorded from between 240 and 250 per year to 58 in the cases under observation.

Transverse Myelitis with Flaccid Paraplegia. By Nogues and Sirol (*Le Progrès Médical*, 29th April, 1899).—This case is that of a woman of 58, who, without hereditary or personal antecedents, was attacked after a chill with tinglings and vague pains in the left leg, then with paralysis with atrophy and hypoæsthesia. Three months later paralysis with more rapid atrophy occurred in the right leg. The paraplegia was completely flaccid, the abolition of the reflexes was complete, the muscular atrophy considerable, and the electrical excitability diminished; but there was no reaction of degeneration. The writers conclude that the case is one of dorso-lumbar myelitis, in which the lesion is situated in the neighbourhood of, or below the centre of, the reflexes, and that the anatomical substratum is an alteration of the grey substance, the roots, and the nerves.

The Cortical Nerve Cells in Eclampsia. By Anglade and Poux (*Le Progrès Médical*, 29th April, 1899).—In this case, in which death occurred after a series of thirty seizures in two days, two conditions were noted—alteration of the nerve cells, and the presence of abnormal elements round the cells. The disappearance of the chromatic granules is regarded as evidence of exhaustion of the cell, and the alteration of its form as resulting from a destructive process. Around the pyramidal cells, but not exclusively round them, were small round cells staining deeply. These were disseminated nearly everywhere, penetrating into the cell space and pressing against its walls. According to these observers there is nothing abnormal, apart from their number, in the presence of these cells, and they think it is wrong to attribute any importance to these in some diseases, particularly in chronic chorea. The presence in the different layers of the cortex, and particularly around the pyramidal cells, of more voluminous and less stained round or oval cells is regarded as more important. These possess a cell wall proper, and have granular contents. One, sometimes two, more voluminous grains represent the nucleus. These elements surround the pyramidal cells, evidently penetrate them, and seem to substitute themselves for those which are destroyed, and they are not encountered under the same conditions except in cases where death results from the status epilepticus. There is a disposition to regard these cells as leucocytes emigrated from the vessels, though Ramon Cajal and Lugaro look upon them as derived from the neuroglia corpuscles.

Insular Sclerosis consecutive to Tubercular Arthritis of the Shoulder. By Lannois and Paviot (*Le Progrès Médical*, 29th April, 1899).—The tubercular disease of the right shoulder had existed for ten years in this case when she came under treatment for right hemiplegia, and six years later, when the left arm began to show commencing paralysis, death occurred from bulbar complications. At the autopsy no lesions were found in the brain, spinal column, or spinal meninges. Several small patches of sclerosis in the cord were discovered, affecting in the upper cervical region the whole extent of the white substance except the crossed pyramidal tract and the lateral parts of the columns of Burdach, but below that point limited only to the right side. These writers insist upon the close relationship between tubercular arthritis and the spinal lesion, and look upon this case as an illustration of the infectious origin of insular sclerosis.

The Histological Lesions of the Central Nervous System in Chronic Hereditary Chorea. By Rispal (*Le Progrès Médical*, 29th April, 1899).—The conditions observed here were a diminution in the number of the pyramidal cells of the second and third layers of the cerebral cortex in the psychomotor regions, a more or less advanced degenerative atrophy of most of the remaining cells, and a very abundant interstitial infiltration by small round cells, apparently neurogliac, in the deeper parts of the cortex, and in particular around the cells in process of atrophy. The existence of cortical lesions at one and the same time parenchymatous and interstitial explains, the writers think, the production of the choreic movements and the mental troubles occurring in Huntingdon's disease.

The Evolution of Permanent Hemiplegia of Cerebral Origin in the Course of Tabes. By Cestan (*Le Progrès Médical*, 10th June, 1899).—As the result of the detailed observation of ten cases of tabes associated with the occurrence of hemiplegia, the following conclusion is arrived at:—If the sensory reflex arc is so affected as to bring about a complete and definite disappearance of the tendon reflexes of one or several members, a cerebral hemiplegia will remain flaccid, without reflex and without spasmodic contracture, in the member whose tendon and bone reflexes are already suppressed.

MATERIA MEDICA AND THERAPEUTICS.

By R. BARCLAY NESS, M.A., M.B., C.M.

Treatment of Aortic Aneurysms by Hypodermic Injections of Gelatine.—The first example of cure by this method was a case of an enormous aortic aneurysm, shown by Lancereaux at the Académie de Médecine, 22nd June, 1897. A further paper by Lancereaux and Paulesco (*Gazette des Hôpitaux*, 13th October, 1898) records in detail a series of three cases of aortic and subclavian aneurysms treated by the same method.

Case I was a huge aneurysm of the aortic arch; coagulation took place and obliterated the sac; the clots organised and shrank so that the size of the sac decreased, relieving the frightful pain from which previously the patient had suffered. The cure persisted for a year, when a small accessory sac made its appearance at the lowest part of the old sac, and caused great pain from pressure on an intercostal nerve. The injections were renewed with the same satisfactory result as before. Case II was also an aneurysm of the aortic arch compressing the superior vena cava and producing great venous stasis in the head, neck, and upper part of the chest; a complete cure ensued as in the preceding case, with complete relief of all the symptoms of pressure on the superior vena cava. Case III was a subclavian aneurysm, pressing on the nerves of the arm and causing great pain; here, again, the clots completely obliterated the sac, and the radial pulse, that previously had been absent, reappeared; the shrinking of the sac relieved all the symptoms of pressure on nerves.

Lancereaux maintains that these cases show the remarkable efficacy of subcutaneous injections of gelatine in sacculated aneurysms; it is not likely to be so useful in simple fusiform dilatations, because coagulation will take place less readily in a running stream than in a stagnant pool; also the danger of obliterating the whole vessel would forbid the experiment. The conclusions derived from these cases are quite simple—viz., that gelatine introduced into the subcutaneous cellular tissue penetrates into the blood and renders it more coagulable; at the site of the aneurysm the blood encounters the two conditions that most favour deposition of fibrin—viz., slowing of the stream and roughness of the vessel wall; thus abundant clot is formed, which eventually obstructs the sac. The formula of the injection employed in these three cases (*Journal des Praticiens*, 3rd November, 1898) differs from that which Lancereaux now recommends.

Lancereaux's most recent communication to the Académie de Médecine (*Journal des Praticiens*, 19th November, 1898) gives in detail the technique he has finally adopted as in his experience the most satisfactory. He prefers the following solution:—

White gelatine, ...	4·5 grammes.
NaCl solution (7 per 1,000), . .	200 c.cm.

This he sterilises in a flask at 120°; it is best to prepare several samples and keep them at a constant temperature of 38° for a few days, so that any may be discarded that become turbid, or which do not solidify on cooling. The apparatus for injecting the solution consists of a flask of 400 c.c., which can be sterilised at 120°, or by placing in boiling water for a quarter of an hour. Into the flask is fitted a rubber cork pierced by two glass tubes, one of which reaches to the bottom of the flask, and is connected by a piece of rubber tubing to a stout platinised needle; the other, very short, can be similarly connected to a pair of bellows or a force-pump; in the course of this tube a glass bulb, filled with wadding, serves to purify the air that compresses the liquid. The flask, cork, tube, and tubing should all be sterilised by boiling; the gelatine flask is then liquefied in a water-bath at 37°, and the solution poured into the sterilised flask, which is quickly corked and placed in a water-bath at 37°. The site of the injection, preferably the buttock, is then carefully purified, and the needle driven deep into the tissues so that the point reaches almost to the underlying aponeurosis. The injection should be quickly administered in less than a quarter of an hour. The procedure is quite painless, and absorption takes place without any general or local reaction. After the injection the patient should be kept absolutely at rest, and the sac of the aneurysm should on no account be palpated. The injections should be repeated every six to eight days till the sac is obliterated; when an important arterial trunk arises from the sac, it is well to employ weaker solutions and lengthen the interval to eight or ten days.

A great deal too much has been made of the possible risks of this mode of treatment; in the case of aortic aneurysms, at anyrate, we must not lose sight of the fact that the patient is under sentence of inevitable death. There can be no question that some danger of obliterating the whole channel of the vessel must be faced, just as nature's spontaneous cure of aneurysms has now and again overstepped the mark in the same manner.—(Raymond Crawford, *Practitioner*, May, 1899.)

Hemostasis with Gelatine.—All the inconveniences of tampons, and the dangers of renewing the hæmorrhage, when they are renewed after ablation of tumours of the nose, are avoided by dropping a little 1 per cent gelatinised water from a syringe on the pedicle of the tumour after the first severest gush has been arrested by compression. The clot forms almost instantaneously. Every time the blood appears, check it afresh with the gelatine, warning the patient not to blow his nose, and to stay in bed twenty-four hours, and instil gelatinised or oxygenated water every two hours.—(*Semaine Méd.*, 14th September, and *The Journal of the American Medical Association*, 12th November, 1898.)

Apocynum Cannabinum: "The Vegetable Trocar."—This drug, which has been used for many years by the American Indians, has been employed at several periods in medicine, but owing to confusion in identifying the plant, and to inert preparations from inactive species, has not attained to general use.

Apocynum cannabinum is the most powerful indirect diuretic known, and herein lies its great value in dropsies; and to its diuretic action alone is due the invigorating effect of this remedy.

Ascitic fluid, as is well known, is highly albuminous; hence tapping a patient is practically equivalent to bleeding him, and the greater the amount of fluid removed the greater the resultant weakness. Dropsical patients literally feed on the albuminoids contained in their closed cavities, and rapidly fail after several tappings. Purgatives act similarly by removing the albumen with the water; but, when the ascitic fluid is forced through the renal filtering plant, the albumen is halted and thrown back into the circulation, and the water alone is allowed to escape, thereby relieving the dropsy and feeding the patient, who has been slowly bleeding to death into one or more of his closed cavities. Hence it is that patients taking this medicine rapidly gain in strength in spite of its depleting effects. The appetite is usually rendered sharp, and this, coupled with the reabsorption of albumen, accounts for the rapid results so often obtained. It is not uncommon for a patient suffering from general anasarca to pass one or two gallons of urine daily until the fluid is all removed.

In his original paper, read before the New Orleans Medical and Surgical Association in December, 1880, Dr. Dabney cites a series of cases (sixteen in number), including examples of cardiac, hepatic, and renal disease associated with extensive anasarca, in which tincture of apocynum was administered, usually in 20 minim doses three times a day, with the happiest results, the dropsy disappearing usually within four or five days, and when recurring later being equally favourably influenced by the drug.

Whether this remedy exerts any peculiar influence over Bright's disease or not, clinical facts do not allow us to state positively; but it is worthy of notice that, in almost every instance where it was administered in that affection, marked diminution of albuminuria and of tube-casts occurred, and in some cases every trace of both disappeared. The following advantages, however, possessed by apocynum should commend it to all physicians:—

1. The small quantity required to produce free diuresis, emesis, or catharsis.
2. Its pleasant aromatic taste.
3. Its tonic properties, which compensate for the depression consequent on free catharsis.
4. Its harmlessness—an overdose being speedily followed by free emesis.

With this remedy at our command, paracentesis will be, in most cases, unnecessary.

Physiological Action.—Dr. J. Rose Bradford has conducted a series of experiments to ascertain the physiological action of apocynum. Its principal action has been found to be on the heart. The heart of the dog was slowed down to two beats to one respiration, and even as low as three beats to two respirations. It will thus be seen that it is far more powerful than digitalis. No such results have ever been obtained experimentally from the use of digitalis, for the vagus becomes paralysed before this point is reached. Clinically it has been found to regulate in a marked manner the action of the irregular heart; but it *does not* slow the normal heart. Its action on the arteries differs from that of digitalis, as is shown by changes in the blood-pressure. It causes no contraction of the arteries, hence no increase in blood-pressure. It therefore resembles strophanthus rather than digitalis in this respect.—(*Treatment*, 22nd December, 1898.)

[*Note.*—The root of apocynum cannabinum is official in *U.S. Pharmacopœia.* So also is the fluid extract prepared from it. A decoction and a tincture have also been used; but the first is emetic and cathartic in its action, due to the fact probably that certain active principles are soluble in water which are not in alcohol. The tincture does not cause the same emetic or purgative action if used with caution.—R. B. N.]

Liantral, an Extract from Coal-Tar (*Monatshefte für praktische Dermatologie*, 1st February, 1899).—Dr. Troplowitz gives an interesting account of a new coal-tar extract which he has recently prepared. He points out that tar is only employed to a limited extent, although it possesses therapeutic properties which are of great value. Many of the preparations of coal-tar which have been made in recent years are hardly used at all, and this is in general due to the facts that they contain only a portion of the active constituents of the original tar, and that they are not convenient for general use. Coal-tar itself is not employed, because the physical characteristics of the crude substance unfit it for therapeutic purposes. Coal-tar is a mixture of some seventy compounds, varying according to the variety of coal employed. About 30 per cent of most coal-tars consist of extremely finely divided coal and combustion resins insoluble in ordinary solvents; and both of these are not merely useless therapeutically, but they are especially the substances which give it its undesirable physical properties. For instance, if some tar ointment is rubbed into the skin, the insoluble particles of coal get into the pores of the skin, partly stop them up, make the absorption of the soluble constituents more difficult, and. lastly, cannot be washed off by the ordinary means available in a household. The principles on which a new preparation of tar was sought for were, on the one hand, to get rid of these useless and harmful substances, and, on the other hand, to retain completely all the soluble and volatile constituents. By means of benzol all that can be dissolved is dissolved from the tar, and the product then filtered; this was a very difficult process, on account of the finely divided state of the coal present. The filtrate was then evaporated at as low a temperature as possible, in order to lose as few as possible of the volatile constituents. The finished product has been called liantral, and is made by Briersdorf & Co.; it is a dark-brown liquid of peculiar aromatic smell. It is insoluble in water, easily soluble in benzol and its homologues, only partly soluble in fatty and essential oils, spirit, and ether.—(*Treatment*, 27th April, 1899.)

Treatment of Gastric Catarrh by the Daily Use of Small Doses of Sulphate of Soda (*La Semaine Médicale*, 3rd August, 1898). —Dr. Simon (Warsaw) has conducted a series of experiments relative to the action of small doses of Glauber's salt in different forms of catarrh of the stomach.

The subjects of these experiments were directed to sip each morning on an empty stomach 200 grammes of water at 40° C. containing 50 centigrammes to 1 gramme of sulphate of soda. This treatment was continued from two to three weeks without any change in the general régime and dietetic habits of the patients being insisted upon beyond excluding fat meats and acids from their food. In cases of mucous catarrh with hypochlorhydria this medication at the end of a few days effectually banished all painful gastric sensations and nausea, and produced regulation of the bowels. Among these patients there were some whose stomach trouble had existed several years, but quite disappeared with the use of Glauber's salt. Their amelioration was no temporary one, but maintained; months after the cessation of all treatment there had been no return of symptoms.

On the other hand, in cases of atrophic gastric catarrh, of anachlorhydria symptomatic of tuberculosis or cancer, of gastroectasis with troubles of the motor functions of the stomach, and finally, in neuroses of the stomach without local lesion, sulphate of soda gave either negative or insignificant results.

The good effects of this drug are (according to Dr. Simon) due to the simultaneous stimulation of both the secretory and motor functions of the organ.

To convince one's self of the reality of this latter action it is only necessary to give Ewald's test breakfast, to which has been added 7 to 15 grains of sodium sulphate. Under these circumstances the stomach will be found completely empty an hour later, while normally it would contain the remains of food at the end of that time.—(*Treatment*, 8th December, 1898.)

Chloralbacid.—Fleiner (*Münch. Med. Woch.*, 3rd January, 1899) has employed this preparation, which is a combination of chlorine with albumen, in various diseases of the stomach. Blum, who first prepared it, found that, in dogs who were dying of deprivation of chlorides, life was slightly prolonged and chlorides reappeared in the urine if chloralbacid were given. It therefore seemed possible that a small amount of HCl might be formed from it in the stomach, and that it might be useful in cases where free HCl was absent or diminished. Although free HCl was never formed from it in any of the writer's 34 cases, a subjective improvement always followed its use, the appetite improved, and the discomfort diminished. This was partly due to a decrease in the total acidity through the arrest of fermentation and consequent formation of organic acids. The writer supposes that this resulted not so much from antifermentative action as from stimulation of the walls of the stomach, and production of a more rapid peristalsis and evacuation. Fleiner has learned, from a series of comparative experiments, that chloralbacid is preferable to artificial hydrochloric acid in anæmia and gastric disorders when the appetite and assimilation are poor, and that it is especially suitable for those cases of atonic dyspepsia, accompanied by anorexia, deficiency of HCl, abnormal production of organic acids, lessened intestinal absorption, and constipation, since it acts on the intestine as well as the stomach.

The original preparation, which was a brown resinous powder, smelling of fatty acids and insoluble in water, was at first given as tabloids; but as some of these were found in the stools unaltered, it was dissolved in weak alkaline waters. Later, a form soluble in water, sodium chloralbacid, from which all fatty acids had been removed, was used in doses of 15 to 30 grains a short time before meals.—(*The Medical and Surgical Review of Reviews*, May, 1899.)

Books, Pamphlets, &c., Received.

Manual of Bacteriology, by Robert Muir, M A., M.D., and James Ritchie, M.A., M.D. Second Edition. With 126 Illustrations. Edinburgh: Young J. Pentland. 1899.

The Newer Remedies: A Reference Manual for Physicians, Pharmacists, and Students, by Virgil Coblentz, A.M. Third Edition, revised and very much enlarged. Philadelphia: P. Blakiston's Son & Co. 1899. (1 dol.)

Aids to the Diagnosis and Treatment of Diseases of Children (Medical), by John M'Caw, M.D., L.R.C.P. Second Edition. London: Baillière, Tindall, & Cox. 1899. (3s. 6d.)

Aids to the Analysis of Food and Drugs, by T. H. Pearmain and C. G. Moor, M.A., F.C.S. Second Edition. London: Baillière, Tindall, & Cox. 1899. (3s. 6d.)

Selby: A Pathological Morality, by Eppie Frazer. London: John Bale, Sons & Danielsson, Limited. 1899. (7s 6d. net.)

The Throat and Nose and their Diseases, with 550 Illustrations in Colour, mostly designed and executed by the Author, Lennox Browne, F.R.C.S.E., with special assistance from Mayo Collier, M.S., F.R.C.S., James Cagney, M.D., and Wyatt Wingrave, M.R.C.S. Fifth Edition, revised and rewritten. London: Baillière, Tindall, & Cox. 1899. (31s. 6d. net.)

Selected Papers on Stone, Prostate, and other Urinary Disorders, by Reginald Harrison, F.R.C.S. London: J. & A. Churchill. 1899. (5s.)

Transactions of the Twentieth Annual Meeting of the American Laryngological Association held in Brooklyn, May, 1898. New York: D. Appleton & Co. 1899.

A Statistical Inquiry into the Causes of Death within the Burgh of Govan for Thirty-five Years (1864-1898), by W. G. Barras, M.D. With an Appendix on the Detailed Returns for each Year. Glasgow: John Crawford. 1899.

Evolution by Atrophy in Biology and Sociology, by Jean Demoor, Jean Massart, and Emile Vandervelde; Translated by Mrs. Chalmers Mitchell. London: Kegan Paul, Trench, Trübner & Co., Limited. 1899. (5s.)

Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Sixteenth Annual Issue. London: Charles Griffin & Co., Limited. 1899. (7s. 6d.)

Aseptic Surgery, by Charles Barrett Lockwood, F.R.C.S. Second Edition. Edinburgh and London: Young J. Pentland. 1899.

A Text-Book of Pathology, by Alfred Stengel, M.D. With 372 Illustrations. London: The Rebman Publishing Co., Limited. 1899. (22s. 6d.)

The Care of the Baby: A Manual for Mothers and Nurses, containing Practical Directions for the Management of Infancy and Childhood in Health and Disease, by J. P. Crozier Griffith, M.D. Second Edition, revised. London: The Rebman Publishing Co., Limited. 1899. (9s.)

The Diseases of Children: A Clinical Handbook, by George Elder, M.D., and J. S. Fowler, M.B. London: Charles Griffin & Co., Limited. 1899. (10s. 6d.)

Retinoscopy (or Shadow Test) in the Determination of Refraction at One Metre Distance with the Plane Mirror, by James Thorington, M.D. Third Edition, revised and enlarged. Forty-three Illustrations (Twelve of which are Coloured). London: Henry Kimptom. 1899. (5s. net.)

An Essay on the Nature and the Consequences of Anomalies of Refraction, by F. C. Donders, M.D.; Revised and Edited by Charles A. Oliver, A.M., M.D. With Portrait and other Illustrations. London: Henry Kimpton. 1899. (6s. net.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FIVE WEEKS ENDING 24TH JUNE, 1899.

	WEEK ENDING				
	May 27.	June 3.	June 10.	June 17.	June 24.
Mean temperature, . .	46·1°	55·6°	61·9°	62·7°	57·5°
Mean range of temperature between day and night, .	13·1°	24·7°	24·7°	30·4°	11·5°
Number of days on which rain fell, ...	3	1	...	1	6
Amount of rainfall, . ins.	0·21	0·04	...	0·02	0·28
Deaths registered, . . .	267	291	264	248	234
Death-rates, ...	18·9	20·6	18·7	17·6	16·6
Zymotic death-rates, . .	1·6	2·8	2·9	2·8	2·3
Pulmonary death-rates, .	5·7	5·2	4·9	5·0	3·8
DEATHS—					
Under 1 year, . . .	49	71	62	48	42
60 years and upwards, .	52	59	49	40	39
DEATHS FROM—					
Small-pox, ...	...	...	...	1	...
Measles, ...	9	12	24	10	13
Scarlet fever, ...	2	6	4	5	5
Diphtheria, ...	...	2	1	2	2
Whooping-cough, . . .	4	7	4	6	3
Fever, ...	...	1	4	3	...
Diarrhœa, ...	8	11	4	12	9
Croup and laryngitis, .	...	2	...	...	...
Bronchitis, pneumonia, and pleurisy, ...	53	46	48	50	32
CASES REPORTED—					
Small-pox, ...	...	1	...	...	...
Diphtheria and membranous croup, ...	11	5	5	8	8
Erysipelas, ...	21	20	18	15	20
Scarlet fever, ...	77	84	81	77	77
Typhus fever, ...	...	...	2	3	1
Enteric fever, ...	10	12	13	9	10
Continued fever, . . .	1	...	...	...	...
Puerperal fever, . . .	1	2	...	...	1
Measles,* . . .	286	311	271	331	334

* Measles is not notifiable.

SANITARY DEPARTMENT,
GLASGOW, *28th June, 1899.*

THE
GLASGOW MEDICAL JOURNAL.

No. II. August, 1899.

ORIGINAL ARTICLES.

THREE YEARS' INDUCTIONS OF PREMATURE LABOUR FOR CONTRACTED PELVIS IN THE GLASGOW MATERNITY HOSPITAL.[1]

By MALCOLM BLACK, M.D.,
Senior Obstetric Physician, Glasgow Maternity Hospital.

In this paper I desire to present a record of the experience of the Glasgow Maternity Hospital in the matter of induction of premature labour for contracted pelvis during the three hospital years that have been completed since I was appointed physician.

The practice of induction of premature labour is adopted when the pelvis is too small to let a living child at term through at all (say a pelvis with a true conjugate under 3 inches), or which will let it through only with difficulty and more or less danger both to itself and to the mother (say a pelvis with a true conjugate of not less than 3 but under 4 inches), and yet where the pelvis is not too small to prevent hope (more or less bright), or, at anyrate, the *possibility* of getting a viable child through it earlier in the pregnancy (say a pelvis with a true conjugate over 2 inches).

In primiparæ the condition will be disclosed by actual examination. Where the patient has been delivered at full time before, her previous experiences will have declared it.

---

[1] Read at a meeting of the Glasgow Obstetrical and Gynæcological Society held on 29th March, 1899.

The true conjugate, the antero-posterior diameter of the brim of the pelvis, is, in the living patient, not accessible to direct measurement; but it may be guessed at from the diagonal conjugate, the measurement from the middle of the sacral promontory to the lower border of the symphysis pubis, which can be measured by the fingers, the difference being usually, in contracted pelvis, about three-quarters of an inch.

The transverse diameter of the brim of the pelvis is also out of reach; but some information can be obtained from two external transverse measurements of the false pelvis—that between the anterior superior iliac spines, and that between the iliac crests at their widest. The former—the interspinous diameter—is normally about 10 inches, and the latter—the intercristal—about 11 inches.

The external conjugate, as it is called, is measured from the middle of the upper margin of the pubic symphysis to the depression below the last lumbar spine. It should not be less, it is said, than 7½ inches, which, allowing 3½ inches for the bones and soft parts, would give a true conjugate of 4 inches.

The method of inducing labour employed at the Glasgow Maternity is that known as Krause's—namely, by inserting a gum-elastic bougie into the uterus, between the membranes and the uterine wall.

The patient is first prepared. She has a general warm bath, and has clean hospital clothing put on before she is brought into the labour-room. If necessary, the rectum is emptied by an enema, and the bladder is ascertained to be empty. The pubis and vulva are then shaved and thoroughly washed with soap and warm water, and well swabbed thereafter with creolin solution. A copious warm vaginal douche of creolin solution is then given before the introduction of the bougie. The bougie has been prepared by being first well washed, then steeped in 1 to 20 carbolic acid solution for at least four hours, and just before introduction placed for half an hour in 1 to 500 corrosive sublimate solution. A bougie is used only once; when removed from the uterus it is at once burned; it is therefore always a new bougie which is used. The operator's hands have also, of course, been carefully sterilised. The bougie is guided into the uterus by the fingers, avoiding contact, as far as possible, with the vulva or vagina. Occasionally it has been passed by the aid of a vaginal speculum, in which way it may be done absolutely without contact with any extra-uterine surface except the lips of the os. When through the internal os, if pushed gently along, it will find its way up outside the membranes without rupturing them, and also without separating the placenta. It is passed up until its lower extremity is within the os uteri. The upper part of the vagina is then packed with a plug of sterilised gauze to keep the bougie from slipping out, and also to assist in stimulating the uterus. If pains are set up in twenty-four hours, the bougie may be taken out and the labour allowed to proceed naturally, the patient being also allowed to get up and walk about. Sometimes the os is found to moisten, soften, and dilate somewhat, although pains are not much, if at all, felt. If no effect has been produced by the bougie it is usually removed in twenty-four hours, a hot douche given, and another one or more bougies inserted. Pains are usually set up within another twenty-four hours, when the bougies are removed. If labour is loth to proceed, the smallest Barnes' bag is introduced (with aseptic precautions) as soon as the os is patent enough, and larger ones may be introduced later. Where possible, dilatation of the os is always best effected naturally by the bag of membranes, therefore we try and keep the membranes unruptured till the os is fully dilated. Should the membranes rupture prematurely, dilatation with Barnes' bags will probably be required. Ultimately De Ribes' bag, cautiously used, is useful in securing full dilatation. After the os is fully dilated delivery may be effected naturally, or, if necessary, by forceps or turning. If the head is found too large to come through, craniotomy will probably be done.

In our cases, from the introduction of the bougie to delivery, the time varied from twelve hours to eight days; in the majority it was within four days.

When the children are feeble they must be kept warm. We swathe them in cotton-wool and put them in an incubator. In private practice an incubator can be improvised in the shape of a large clothes-basket (found in every house), in which the baby, well swathed in cotton-wadding, can be surrounded by hot-water bottles enclosed in stockings, and packed in flannel or cotton-wadding. Placed beside a warm fire, with a draught-screen round it, this answers admirably.

Since the middle of November, 1895, when I was appointed physician, to the middle of November, 1898, we had in the Glasgow Maternity Hospital, under the care of myself and colleagues, 50 cases where we induced premature labour on account of contracted pelvis, or of serious disproportion between pelvis and child, as evidenced by previous difficult labours. Of the mothers, I regret to have to record that

2 died; the rest were all dismissed well. As regards the children, 5 of the labours were completed by craniotomy, of course with the necessary loss of the children. In the remaining 45 cases, 15 children were still-born (either born dead or dying immediately after birth); 10 were born alive, but died before leaving the hospital; and the remaining 20 were born and dismissed alive, and apparently likely to live.

TABLE I.

I will first read notes of the two cases where the mothers were lost—our two worst failures. The first occurred under my own care; the second under that of my colleague, Dr. Jardine.

CASE 1.—A. R., aged 28, primipara. True conjugate estimated at 3 to 3⅛ inches. Left hip-joint ankylosed. Supposed to be just entering the ninth month of pregnancy, but was really probably within a fortnight of full time. Labour induced by bougie. When os was well dilated, the house surgeon applied Simpson's axis traction forceps without result. I then applied Professor Cameron's antero-posterior compression forceps, and, making considerable compression, succeeded in bringing the child through dead, its skull being crushed. It weighed 7½ lb. After expulsion of placenta, on proceeding to give a hot intra-uterine douche of a weak carbolic solution (1 in 120), the nozzle was found to pass into the abdominal cavity. The nozzle was at once disconnected, and the fluid drained away. Patient became rapidly collapsed, and, in spite of free stimulation, died shortly after. The *post-mortem* examination showed a transverse rent, 2½ inches long, in the posterior wall of the uterus opposite the sacral promontory. The true conjugate was found to be only 2¾ inches. The mistake in estimating the size of the true conjugate was due to unusual thickness of the pubic bones at the symphysis. There was also a further diminution of the available space by a dense fibrous matting in the left side associated with the old hip-joint disease.

The chief lesson to be derived from this case is not to persevere with forceps where a sufficient trial has been given them. My first instinct here, after our house surgeon had failed to move the head with the forceps, was to perforate, and had I done so, the child would have fared no worse, and the rupture might not have happened. It is very difficult, however, if it be possible, to recognise the exact amount of tractile force which can be exercised with the forceps without endangering the mother. Had this patient come at the end of the seventh month, instead of nearly at full time as she did, the result of induction would of course have been very different.

Case 2.—Mrs. T., age 27, ii-para. True conjugate, 3¼ inches. Her first confinement had been at full time, and was completed by craniotomy. She was believed to be now at seven and a half months. Labour induced by bougie. When os admitted two fingers and seemed fairly dilatable, an indiarubber De Ribes' bag was introduced and expanded with warm carbolic solution. Alarming hæmorrhage occurred, and the bag was emptied and withdrawn, when it was found to be burst. Dr. Jardine then dilated the os rapidly with the hand, and turned and delivered the child alive. It weighed 6¼ lb. The cervix appeared to be torn, but a hot douche after removal of the placenta checked the hæmorrhage, and the uterus contracted well. Bleeding recurred, however, evidently from the cervix. The cervix and vagina were then packed firmly with iodoform gauze, and intravenous saline transfusion, hot applications, and free stimulation were used, but the patient sank, and died two and a half hours after delivery. The child was dismissed from hospital well. The ante-partum hæmorrhage had apparently been caused by the escaped fluid separating the placenta, which was probably situated low down.

The De Ribes' bag in rubber will not be used by us again. Those made of silk are more reliable, but one cannot be too cautious in the use of either of them.

Table II.

Five cases were completed by craniotomy; three of these were in primiparæ, and two in multiparæ.

Case 3.—L. M'I., primipara. True conjugate under 3 inches (2¾ inches). Induced at seven and a half months, head presenting. The hand having been passed into the uterus with the intention of turning, the cord was found pulseless, and the child concluded to be dead; accordingly, turning was abandoned, and the child delivered by craniotomy. In this case the membranes were ruptured on introducing the bougie, which probably accounted for the death of the fœtus by subsequent pressure. Patient dismissed well.

Cases 4 and 5 came in too late.

Case 4.—Mrs. A., primipara, a generally contracted pelvis with a true conjugate of about 3 inches, was at the end of her eighth month. Forceps failed, and perforation was then done. Advised to come next time at seven months. Dismissed well.

CASE 5.—Mrs. M'L., primipara, was nearly at full time when she was advised to come into the hospital. The true conjugate is under 3 inches. Labour was induced with but little hope of getting a living child. Version was performed, but the head was too large to pass, so it was perforated through the base, and delivered by suprapubic pressure and traction on body. She had a perineal tear which took some time to heal.

Cases 6 and 7 were in multiparæ.

CASE 6.—Mrs. G., third confinement, was admitted to hospital within four weeks of term. Induction was started at once. Her true conjugate was estimated at 3 inches. Version was performed, and as the head would not pass, it was perforated. She was dismissed well, and was advised to report herself next time at least six weeks before term.

Her previous obstetric history was as follows:—First confinement, a mature dead child delivered by forceps in the Maternity, cord was prolapsed and pulseless on admission; second confinement, induction at eighth month, forceps delivery, child alive and well.

CASE 7.—Mrs. W., fourth confinement. Her true conjugate was estimated at 3¼ inches, and she was well on in the ninth month. Labour induced at once. Milne Murray's axis traction forceps tried by Dr. Jardine, first in lateral position and then in Walcher's, but without success. Perforation was then done, and the child delivered. Before perforation the fœtal heart sounds had ceased to be heard. Patient dismissed well, and advised to return for advice next time about the seventh month. Her previous obstetric history is not recorded.

TABLE III.

In fifteen other cases the child was born dead, or died immediately after birth. The following five of these were in primiparæ.

CASE 8.—A. R. was the case of death from ruptured uterus already dealt with (see Case 1).

CASE 9.—L. R., induced at eight and a half months; forceps; dismissed well.

CASE 10.—F. M'K., at eight months; generally contracted pelvis; true conjugate, 3¼ inches; delivered by forceps. Dismissed to Town's Hospital with incontinence of urine from where she was dismissed well.

Case 11.—R. H., aged 30, at eight months; breech presented; cord prolapsed, found to have ceased pulsating, when child was rapidly extracted by feet, dead. Perineum torn; stitched; healed; dismissed well. Patient has rickety legs, is of small stature, and is stunted in mind and body (according to the journal).

Case 12.—Mrs. M‘L., age 26, at seven and a half months. True conjugate, 2¾ inches. Extreme rickety deformity of legs. A sister had been delivered by Cæsarean section. Head presented. Membranes ruptured prematurely. Dilatation continued with Barnes' bags. On withdrawal of bag, elbow found protruding from os. Head brought round again to os. I delivered with Cameron's antero-posterior compression forceps slowly, and relieving compression during intervals of traction. Child weighed 5 lb. The heart was beating when child born, but it could not be got to breath.

The remainder were multiparæ. Cases 13 to 20 were second confinements.

Case 13.—Mrs. B. M‘L., second confinement. This was the same patient as Case 5, with the true conjugate under 3 inches. Admitted again in a second confinement. Induced labour at seven and a quarter months; foot presented; delivered by traction and suprapubic pressure with difficulty. Child 3¾ lb. It made some feeble attempts at respiration, but succumbed. Patient made an uninterrupted recovery.

Case 14.—J. M‘S., second confinement; generally contracted pelvis; true conjugate, 3 inches. Induced at seven and a half months; head presented; membranes ruptured prematurely; delivered naturally of a 3¾ lb. child, measuring 17 inches, which died a few minutes after birth.

History.—First confinement: induction at eight months; head presented; cord prolapsed after rupture of membranes. Version was at once performed, but delivery was delayed by difficulty in bringing down the arms, with the result that the child was born dead.

Case 15.—Mrs. M‘G., aged 29; true conjugate, 2½ inches; second confinement. Induction at seven months; forceps at brim. Child still-born, 3¼ lb., 18 inches. Dismissed well. Puerperium normal.

History.—No record of first confinement.

Case 16.—Mrs. P., aged 22; true conjugate, 3¼ inches; second confinement. Induction at eight months; delivery natural. Child, male, still-born, 5 lb. Patient dismissed well. Her first confinement was completed by craniotomy.

Case 17.—Mrs. M., aged 22; true conjugate, 2½ inches;

second confinement. Head and foot presented. Version performed. Required considerable traction and suprapubic pressure on head to deliver. Child 4¾ lb., born dead. Head was "badly indented over left parietal bone." Made good recovery.

History.—First confinement completed in Glasgow Maternity by craniotomy. On admission, the membranes were found ruptured, and the cord presenting and pulseless.

The following note occurs in the journal:—"The patient is very small and rickety looking, and has a marked lateral curvature of the spine in the lower dorsal region, convex to the right, with rotation of the vertebræ and prominence of the angles of the ribs on the right side. The sacral promontory deviates to the left, and the capacity of the left side of the pelvis, which is extremely shallow, is very much less than that of the right side." Patient's height is 47¾ inches; diagonal conjugate, 3¼ inches; external conjugate, 6 inches; intercristal diameter, 9¾ inches; interspinous diameter, 9¾ inches.

CASE 18.—Mrs. O., aged 26; true conjugate, 3¼ inches; second confinement. Induction at seven and a half months; head presented; delivery natural. Child about 5 lb., died immediately after birth. Membranes had ruptured on introduction of bougie. Patient made good recovery.

Her first confinement had been completed by craniotomy after version.

CASE 19.—Mrs. S., aged 28; true conjugate, 2¾ inches; second confinement. Induction at seven and a half months, it was supposed, but was probably earlier. Child presented breech, was born naturally, weighed 2¼ lb., and died in a few minutes. Patient was 3 feet 11 inches in height, and very rickety looking. She made a good recovery.

At her first confinement Dr. W. L. Reid, in the Glasgow Maternity, induced labour and delivered her by forceps of a living child, weighing 3½ lb. and measuring 15 inches, which died on the fifth day after birth.

CASE 20.—Mrs. C., aged 32; true conjugate, 3 inches; second confinement; head presented, and cord prolapsed. Delivered by version; child born dead, 5¼ lb. Patient dismissed well.

At her first confinement Professor Cameron delivered her in the Maternity with forceps. The report says "there was a good deal of bruising of the head." Its heart was beating, but it could not be got to breathe.

CASE 21.—Mrs. M'D., aged 33; true conjugate, 3 inches; sixth confinement; pelvis generally contracted. Induction at eight and a half months. Child presented breech, extracted by feet and suprapubic pressure. Child dead, 6¼ lb. Membranes had ruptured on introduction of bougie.

Obstetric history.—First and third confinements were miscarriages; second, induction (at Rotunda, Dublin), child alive (now strong and healthy); fourth, delivery at term in Glasgow Maternity Hospital, forceps at brim, child born dead, weighing 7⅛ lb.; fifth, induction in Glasgow Maternity Hospital not far from full time, when Professor Cameron delivered by antero-posterior compression forceps a live child weighing 6½ lb.

CASE 22.—Mrs. N., aged 38, fifth confinement. True conjugate, 3¼ inches; induction at eighth month. Duration of induction—that is, period from introduction of bougie to delivery—four days. Child presented breech, born dead, weighing 5 lb., and measuring 18½ inches.

History.—Her third child was born alive without much difficulty. Her other labours were all difficult, and the children were all born dead.

TABLE IV.

In the next ten cases the child was born alive, but died before leaving the hospital.

CASE 23.—L. M., primipara, aged 29; true conjugate, 3 inches. Period of pregnancy not noted. Pains began about an hour after the introduction of the bougie, and labour was completed naturally in twelve hours. Child born alive, weighing 4¼ lb., and measuring 17 inches. It died some days after. Patient dismissed well.

CASE 24.—Mrs. L., aged 30, second confinement; supposed to be seven and a half months pregnant. Child presented head, and was delivered by forceps in Walcher position; born alive, 4 lb., 17 inches. It required artificial respiration for half an hour before voluntary breathing was established, and it was put in the incubator. It could not take milk; tried meat juice; died on third day. Patient dismissed well.

At her first confinement, which was at full time, version was performed, and the after-coming head perforated.

CASE 25.—Mrs. T., aged 24, second confinement. True conjugate, 3¾ inches. Period of pregnancy not noted. Child presented breech, and was born naturally. It weighed 2¼ lb., and was 11½ inches long. It was very feeble when born, the report says, and only lived about an hour and a half. This case was evidently induced much too soon.

There is no history of her first confinement.

CASE 26.—Mrs. W., aged 25, third confinement. Seven and a half months pregnant. True conjugate, 3 to 3¼ inches. Child presented head, and was born naturally alive, weighing 4½ lb. It died in twelve hours. Patient dismissed well. Her history will be noted further on.

CASE 27.—Mrs. C., aged 32, third confinement. Supposed to be seven months pregnant. True conjugate, 2⅞ inches. Child presented shoulder; cord prolapsed. Version performed. Child extracted alive. It weighed 2¼ lb., and died in an hour.

History.—First confinement, forceps, dead child; second, induction and version, dead child.

CASE 28.—Mrs. C. (the same patient as last case), in her fourth confinement. Child presented shoulder. Cephalic version was performed, and delivery effected with forceps. Child weighed about 5 lb. It lived for eight and a half hours.

CASE 29.—Mrs. H., iv-para, aged 34, with contracted pelvis. Period of pregnancy not noted. Membranes ruptured prematurely. Dilatation completed with Barnes' bags. Child presented head. Version performed, and child delivered easily. It was born alive, weighed 5 lb., and measured 18 inches, but died in five hours.

History.—She was sent in by Dr. Oliphant as a case of contracted pelvis to have labour induced. He had attended her in her last previous confinement, inducing labour at seven months, but the child then born lived only a few hours. Her first and second confinements had been forceps deliveries of dead children.

CASE 30.—Mrs. M'D., aged 29, fifth confinement. True conjugate, 2¾ inches. Induction at seven and a half months. Child presented head, born naturally alive, 4½ lb., 17 inches. It died in five hours. Patient dismissed well.

Her first three pregnancies terminated by spontaneous premature labour, the first at seven and the second and third at eight months. The second and third were completed with forceps. All three children were still-born. Fourth confinement, induction (seven and a half to eight months), live child. Case reported further on.

CASE 31.—Mrs. H., aged 30, sixth confinement. True conjugate, 3 inches. Induction at eighth month. Child presented head, and was born naturally alive, weighing 5¼ lb., and measuring 18 inches. It died next day. Patient dismissed well. History will be given further on.

CASE 32.—Mrs. R., aged 29, seventh confinement. Period of pregnancy not noted. Child presented shoulder. The head was brought to present by external manipulation. The heart sounds became much less distinct. Forceps applied at brim and delivery effected. It took an hour's work to bring the child round, and it died a few hours later. It weighed 5½ lb.; length, 18½ inches. Patient dismissed well. She had a very difficult instrumental labour at her last confinement.

TABLE V.

In the remaining twenty cases the child left the hospital alive. Cases 33 to 36 were in primiparæ.

CASE 33.—Mrs. N., age 27, primipara; true conjugate, 2¾ inches. Induction at seven and a half months. Child presented vertex; born naturally alive, 5½ lb., and 17 inches. Dismissed mother and child well.

CASE 34.—L. M., aged 26, primipara; true conjugate, 3¼ inches. Induced labour at eight months. Child presented head; born naturally alive, weighing 5½ lb., and measuring 18 inches.

CASE 35.—J. M., aged 22, primipara, with double lateral spinal curvature, slight lumbar kyphosis; pelvic outlet small. Induction at or over eight months. Child presented head; delivered with forceps; weighed 7 lb., and measured 18 inches. Patient dismissed fairly well; child well. Patient had been informed by a medical man that it would probably be impossible for her to be delivered of a living child at term, and advised her to come to hospital at end of eighth month.

CASE 36.—Mrs. T., aged 23, primipara; true conjugate, 3¼ inches or less. Has spinal curvature; lateral curvature in lower dorsal region, convex to left. The sacral promontory is diverted to left, and the left side of the pelvis is less capacious than the right. Supposed to be at end of eighth month. Live female child delivered by forceps; weighed 4 lb., and measured 17 inches. Mother and child dismissed well.

CASE 37.—Mrs. T., second confinement. This was the case fatal from accidental hæmorrhage already narrated.

CASE 38.—Mrs. W., aged 25, third confinement. Supposed to be eight months pregnant. Live female child born naturally, of 4¾ lb., and measuring 17 inches. Patient and child dismissed well. Her first and second confinements had been difficult forceps deliveries of dead children, and she was advised by her last medical attendant to come into the Maternity next time and have labour induced at eight months.

CASE 39.—Mrs. B., aged 26, third confinement; true conjugate, 3 inches. Pregnant eight and a half months. Live child, delivered by forceps, weighing 7 lb. and measuring 18½ inches. Patient and child dismissed well.

History. — First confinement, forceps, dead child; second confinement, induction; child, 4 lb., died seven days later.

CASE 40.—Mrs. W. (Case 26 of last class), aged 26, fourth confinement; true conjugate, 3 to 3¼ inches. Induction at eight and a half months. Live child delivered by forceps, weighing 7 lb. Mother and child dismissed well.

History.—First confinement, forceps, child living; second, version and craniotomy; third, induction at seven and a half months (Case 26 of last class), when child died in twelve hours.

CASE 41.—Mrs. M'D. (Case 30 of last class), fourth confinement; true conjugate, 2¾ inches. At eighth month. Child presented foot, extracted alive, a female, weighing 6¼ lb., and measuring 18½ inches. Child's head was indented by sacral promontory. Mother and child dismissed well.

History.—First three confinements, spontaneous premature labours: first at seventh, second and third at eighth month; second and third, forceps. All still-born.

CASE 42.—Mrs. M., aged 26, fourth confinement; true conjugate, 3¼ inches. At eighth month. Presentation head, along with a hand and foot. Foot brought down, and with some pressure from above child was easily delivered alive. It was a female; weight not noted, but said to be healthy and vigorous. Patient and child dismissed well.

History.—First confinement—live girl at term, died in six hours; patient had a tedious convalescence. Second—live girl at term, who is still living. Patient was under chloroform on both occasions, delivery being probably effected by version. Third—at term, forceps, child a boy, born alive, but died in a few minutes.

CASE 43.—Mrs. R., aged 30, fifth confinement. At eight and a half months. Child presented head, and was delivered naturally; weighed 8 lb., and measured 18 inches. Patient and child dismissed well.

History.—Of her four previous births, the first was normal, the second occurred three weeks before term, and the third and fourth were completed with difficulty by forceps. Patient was therefore advised by her medical attendant to have labour induced this time about a fortnight before term, and therefore came into Maternity.

CASE 44.—Mrs. H., aged 28, fifth confinement; true conjugate, 3 inches. At eighth month. Presentation head, male child, born alive naturally, weighing 5 lb., and measuring 17 inches. Mother and child dismissed well.

History.—First and third confinements—spontaneous premature labours, children born dead. Second and fourth—craniotomy. Her sixth confinement has been given as Case 31 of last class.

Case 45.—Mrs. T., aged 27, fifth confinement. At seven and a half to eight months. True conjugate, 3½ inches. Head presented, child born naturally, female, alive, weighing 5 lb., and measuring 19 inches. Mother and child dismissed well.

History.—First confinement—forceps at brim, child born dead. Second—induction at eighth month, live child. Third—at term, version with forceps on aftercoming head; child male, born dead, weighing 6¼ lb.; high temperature throughout puerperium. Fourth—induced at eight months, male child, alive, weighing 5½ lb.; mother and child dismissed well.

Case 46.—Mrs. S., aged 29, fifth confinement. At eighth month. Child presented head, and was born naturally alive; a female, weighing 6½ lb., and measuring 19 inches. Patient and child dismissed well. Absolutely normal puerperium.

At her last confinement she had been delivered with great difficulty, had a very tedious convalescence; she was therefore advised by her medical attendant to come into Maternity this time for induction.

Case 47.—Mrs. B., fifth confinement; true conjugate, 3¼ inches. At eighth month. Head presentation, with placenta prævia. Version performed, and a living child extracted, weighing 6½ lb., and measuring 19 inches. There was considerable hæmorrhage, but patient made an excellent recovery. Temperature normal throughout puerperium. Mother and child dismissed well.

History.—Previous labours difficult, all at full time, and completed by turning. Children all living.

Case 48.—Mrs. W., fifth confinement. At eight and a quarter months. True conjugate, 3¼ inches. Child presented head, was born naturally, alive, female, weighing 7 lb., and measuring 20 inches. Mother and child dismissed well.

History.—First confinement—full time, forceps, child well. Second—full time, version, craniotomy. Third—labour induced at eight months; child weighed 4½ lb., and measured 17½ inches; died in twelve hours. Fourth—induced at eight and a half months, lived for eleven months, when died of whooping-cough; at birth weighed 7 lb.

Case 49.—Mrs. A., seventh confinement: true conjugate, 3¼ inches. At eighth month. Child born naturally, weighing 5 lb., and measuring 17½ inches. Mother and child dismissed well.

History indefinite; had chloroform with all her labours; forceps in one; others probably by turning.

CASE 50.—Mrs. S., aged 29, seventh confinement; true conjugate, 3 inches. At eighth month. Head presented; forceps failed, then version. Child extracted alive by traction on trunk and suprapubic pressure; weighed 6¾ lb., and measured 20 inches. Head indented by promontory. Mother and child dismissed well.

History. — First confinement — craniotomy. Second — induction at seven and a half months; child born dead. Third — induction at eighth month; child born dead. Fourth—induction at eight months; version, forceps; child died immediately after birth. Fifth—induction; shoulder presented; version and delivery by feet without difficulty; child born alive, weighing 4 lb. 6 oz.; died in four hours. Sixth—came into hospital at, as she thought, eight months for induction. Labour came on spontaneously next day, the os being fully dilated, the report says, before patient felt any pains. Presentation, footling. Great difficulty in extracting the head, which was deeply grooved by promontory. Mother and child dismissed well.

CASE 51.—Mrs. S., aged 37, thirteenth confinement. At eighth month. True conjugate, 3 inches. Child presented head, born naturally, alive, weighing 5½ lb., and measuring 18 inches. Mother and child dismissed well.

History.—First eight confinements spontaneous premature labours, children dying not long after birth. Ninth—induction at eighth month, living child. Tenth—labour at term, craniotomy. Eleventh—difficult forceps delivery at term, live child, weighing 7 lb. Twelfth—forceps at term, severe pull, child born dead.

CASE 52.—J. H., aged 25, iii-para. First and second confinements completed by craniotomy. True conjugate, estimated 2½ inches. Labour induced at seventh month by bougie and vaginal plug. On removing the bougie the case was allowed to go on for some days. During the day a Barnes' bag was occasionally put in, and taken out in the evening. She slept well at night; 1 dr. of bromidia occasionally given at bedtime. The Barnes' bag set up pains, but these ceased when it was taken out. Ultimately strong pains were set up, and labour advanced. On the sixth day after the introduction of the bougie, the os being fully dilated, I ruptured the membranes and turned, and the child was delivered without much difficulty. It weighed 3½ lb. It was placed in the incubator, and fed with breast milk drawn off with the exhauster. At first the milk was supplied by another patient in the ward, but by the third day the mother herself was able to supply it. It was nine days before the baby took the breast, but it sucked all right after that. Mother and child were dismissed both well on the nineteenth day after labour, child weighing 4 lb., and giving every appearance of thriving. It had been out of the incubator for some days.

Of these fifty cases of induction of labour, two, as we have seen, were fatal to the mother. In the first case, induction was done far too late, and delivery should have been effected by craniotomy or Cæsarean section. In the second, the fatality was occasioned by an accident directly resulting from the induction. All the other mothers made good, most of them excellent, recoveries, and most of them had very difficult and dangerous labours on previous occasions. Notwithstanding our two fatalities, it seems to me that, in a case of contracted pelvis, if an induction is timely and carefully done, and with strict aseptic precautions, it ought to be little, if any, more dangerous to the mother than a labour at full time through a normal pelvis.

As regards results to the child, of fifty children, thirty were lost and twenty only ultimately survived—that is, three-fifths were lost and two-fifths saved. This result does not look brilliant. Can it be improved?

Some of the children were probably sacrificed by the rupture of the membranes on introduction of the bougie, and the consequent continued pressure on the child throughout the first stage. This can usually be avoided. Some were done too late and some too early. The information obtained as to the time of commencement of pregnancy was often vague, and examination of the abdomen is frequently fallacious. Some women did not come back as soon as they were told, and some were induced rather earlier than we desired lest the patient should not come back if sent away again.

Müller's method of ascertaining the proper time to induce labour may be useful. It is thus described by Jellett:—"Place the patient in the cross bed position. Introduce two fingers into the vagina, and palpate the presenting head. Then get an assistant to grasp the head through the abdominal wall and to endeavour to push it down through the pelvic brim. If he succeed, it is too soon to induce labour. This manipulation should be performed at intervals of a few days, until the day comes that he cannot push it through the brim—the first day on which this occurs is the day on which labour should be induced." This manœuvre will be facilitated by having the patient under chloroform. It is not so easy to carry out satisfactorily as it looks on paper.

That our results as to the children are capable of improvement, I have been very much encouraged to hope from a perusal of the remarkable record of inductions for contracted pelvis by the venerable Dr. Moir, which was distributed at the Edinburgh meeting of the British Medical Association. Of eighty-seven children born when labour was prematurely induced, seventeen only were lost—that is to say, instead of saving only about two-fifths of his babies, he lost only about one-fifth.

He thought that his success largely depended on inducing slowly. Our cases were usually over within four days; he took usually a week. He generally commenced operations, he says, a week before the time he wished the birth to take place. His procedure is gradual dilatation of the os from day to day, by the fingers if originally sufficiently patulous and easily reached, or by a smooth, blunt metal dilator if otherwise, and then the separation of the membranes round the os gently, either by finger or dilator. "In the course of three or four days," he says, "but sometimes not until six or seven, the condition not only of the os and cervix, but also of the vagina, becomes entirely changed, so as to be soft, relaxed, and dilatable, very much as at the full time. So soon as this occurred, and I could easily reach the os and cervix with the fingers, at first with one and as soon as I could with two, I proceeded to the more complete dilatation of the os and cervix and separation of the membranes. This procedure was repeated daily, occasionally, but very seldom, morning and evening; at times only every second day, in every case occupying a very few minutes. The labour pains do not come on uniformly. Sometimes they are continuous from their commencement; at others they are very slight and at long intervals. But no interference is required as long as there is no undue pressure on the child, or until the os and cervix are quite soft and dilatable, when means may be used to bring the case to a termination."

He says he occasionally uses a small Barnes' bag, but lately he has been horrified to see the formidable De Ribes' bag, and would never dream of using such a thing.

Dr. Moir lost two mothers from sepsis. This risk will be minimised by adequate aseptic precautions.

Patients are apt to get annoyed when they fancy labour is going on for a week, but if they sleep soundly at night, and walk about and amuse themselves through the day, there should be no harm done. They are not really in labour all the time. We ought to remember that before labour at term there is a preliminary preparatory process, a softening and moistening of the cervix and a dilatation of its canal from the internal os outwards, which lasts for about a fortnight, and it is but reasonable, I think, that such a stage should be recognised and provided for in the induction of premature labour. The preparatory stage commences with the dilatation of the internal os, and terminates with the obliteration of the cervical canal. Labour proper begins with the dilatation of the external os. The patient is not usually conscious of this preparatory stage of labour at term, because the uterine contractions by which it is brought about are generally, though by no means always, painless.

Not infrequently the child presents transversely, and the cord is frequently prolapsed, when turning by the feet is likely to be done, or the breech may originally present. Further, if the head fails to enter the brim, turning and extraction by the feet is a proceeding which is very tempting. When turning is done, do not do so if possible till sure that the os is sufficiently dilated to allow the head to come through it easily. But it is probably safer for the child to deliver with forceps rather than to turn. When the shoulder presents, the head can often be brought round to the os and the forceps applied.

The great question of induction *versus* symphysiotomy at full time demands notice. The lower limit of symphysiotomy, Professor Morisani told the Edinburgh meeting, is 2¾ inches in the true conjugate. Of the twenty successful inductions in our record, there are two with a true conjugate of 2¾ inches and one with 2½ inches. If this is the downward limit of symphysiotomy at full time, its field seems well covered by induction of premature labour. In the reports by M. Pinard of symphysiotomies at La Clinique Bandelogue, Paris, for the last three years that have come into my hands—viz., 1895-97—there were 41 cases operated on. The general results were—35 women lived, 6 died; 34 children lived, 7 died. The mortality of the children, about one-fifth, is the same as Dr. Moir's for induction. That of the mothers is very much worse than ours for induction. Of course, however, for such statistics to be properly compared, details would have to be exhaustively examined. Whether symphysiotomy at full time may take the place of induction of premature labour in the future, it has been suggested, and it seems to me with considerable reason, that combined with induction of premature labour it might take the place largely of Cæsarean section, the mortality of which is still very great.

INDUCTIONS OF PREMATURE LABOUR FOR CONTRACTED PELVIS.

No.	NAME.	Age.	Con-finement.	PATIENT.						Period of Pregnancy.	CHILD.					PRESENTATION.	METHOD OF DELIVERY.	Duration of Induction.
				Height.	True Conjugate.	Diagonal Conjugate.	External Conjugate.	Interspinous Diameter.	Intercristal Diameter.		Sex.	RESULT.		Weight at Birth.	Length.			
												At Birth.	On Dismissal.					
				Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Mos.				Lb.	Ins.			Days.
	TABLE I.—TWO CASES FATAL TO MOTHER.																	
1	A. R.	28	1st.	...	2¾	4	...	...	...	8½	F.	Dead.	...	7½	21	Vertex.	Forceps.	5
2	Mrs. T.	27	2nd.	...	3¼	3⅞	7	10¼	10½	7½	F.	Alive.	Alive.	6¼	18¼	Vertex.	Podalic version.	2
	TABLE II.—FIVE CASES COMPLETED BY CRANIOTOMY.																	
3	L. M'I.	26	1st.	...	2¾	3½	6	9⅜	9	7½	F.	Dead.	...	5	19	Vertex.	Craniotomy.	3
4	Mrs. A.	27	1st.	...	3⅛	3⅞	6½	9	9⅝	8	...	Dead.	...	4½	19½	Vertex.	Forceps, craniotomy.	6
5	Mrs. B. M'L.	...	1st.	...	2¾	3½	...	...	...	8¾	M.	Dead.	...	...	...	Vertex.	Version, traction, suprapubic pressure, craniotomy.	3
6	Mrs. G.	32	3rd.	...	3	3¾	7	9⅝	10⅜	8¼	M.	Dead.	...	6	19	Vertex.	Version, craniotomy.	3
7	Mrs. W.	32	4th.	...	3¼	4	...	...	...	8½	F.	Dead.	...	5¾	21	Vertex.	Forceps, craniotomy.	2

TABLE III.—FIFTEEN CASES WHERE CHILD WAS BORN DEAD OR DIED IMMEDIATELY.

8	A. R.	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...
9	L. R.	21	1st.	...	3½	4¼	7	10⅞	10⅞	8½	M.	Dead.	...	6½	19	Vertex.	Forceps.	3
10	F. M'K.	23	1st.	...	3¼	4	...	...	...	8	F.	Dead.	...	5½	20	Vertex.	Forceps.	3
11	R. H.	30	1st.	...	3¼	4	5¾	9⅜	10⅝	8	F.	Dead.	...	6¼	...	Breech & cord.	Traction.	5
12	Mrs. A. M'L.	26	1st.	...	2¾	3½	7	10¾	10¾	7½	F.	Died immediately.		5	...	Head & hand.	Forceps.	3
13	Mrs. B. M'L.	...	2nd.	...	2¾	3½	...	...	...	7¼	M.	Dead.	...	3¾	16	Foot.	Traction and suprapubic pressure.	2
14	J. M'S.	23	2nd.	...	3⅛	3⅞	7	8½	9¾	7½	M.	Dead.	...	3¾	17	Vertex.	Natural.	4
15	Mrs. M'G.	29	2nd.	...	2½	3¼	...	...	...	7	F.	Dead.	...	3¼	18	Vertex.	Forceps.	3
16	Mrs. P.	22	2nd.	...	3¼	4	...	...	...	8	M.	Dead.	...	5	...	Vertex.	Natural.	3
17	Mrs. M.	22	2nd.	47¾	2½	3¼	6	9¾	9¾	...	M.	Dead.	...	4¾	...	Head & foot.	Version, traction, and supra-pubic pressure.	5
18	Mrs. O.	26	2nd.	...	3¼	4	6¾	10¼	10	7½	F.	Died immediately.		4⅞	...	Vertex.	Natural.	4
19	Mrs. S.	28	2nd.	47	2¾	3½	...	9	9	7	M.	Died in a few minutes.		2¼	...	Breech.	Natural.	4
20	Mrs. C.	32	2nd.	...	3	...	...	...	...	...	...	Dead.	...	5¼	...	Head & cord.	Version.	2
21	Mrs. M'D.	33	6th.	...	3	...	...	...	...	8½	...	Dead.	...	6¼	19	Breech.	Extraction.	3
22	Mrs. N.	38	5th.	...	3¼	4	...	...	...	...	..	Dead.	...	5	18½	Breech.	...	4

2. *History.*—First confinement—craniotomy.

6. *History.*—First confinement—at term, forceps, child dead; second—induction, eighth month, forceps, live child.

8. See Table I, Case 1.

9. Lips of false pelvis everted.

10. Pelvis generally contracted.

13. See Table II, Case 5. *History.*—First confinement—craniotomy.

14. Generally contracted pelvis. *History.*—First confinement—induction at eight months, child born dead.

16. *History.*—First confinement—craniotomy.

17. *History.*—First confinement—craniotomy.

18. *History.*—First confinement—craniotomy.

19. Spinal curvature. *History.*—First confinement—induction, forceps, child (3½ lb.) died five days after birth.

20. *History.*—First confinement—forceps, child still-born.

21. Pelvis generally contracted. *History* —First and third confinements—miscarriages; second—induction, child alive; fourth—term, forceps, child born dead; fifth—induction, forceps, live child, 6½ lb.

INDUCTIONS OF PREMATURE LABOUR FOR CONTRACTED PELVIS (*continued*).

TABLE IV.—TEN CASES WHERE CHILD WAS BORN ALIVE, BUT WHERE IT DIED BEFORE LEAVING HOSPITAL.

No.	Name.*	Age.	Con-finement.	Patient.						Period of Pregnancy.	Child.					Presentation.	Method of Delivery.	Duration of Induction.
				Height.	True Conjugate.	Diagonal Conjugate.	External Conjugate.	Interspinous Diameter.	Intercristal Diameter.		Sex.	Result.		Weight at Birth.	Length.			
												At Birth.	On Dismissal.					
				Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Mos.				Lb.	Ins.			Days.
23	L. M.	29	1st.	...	3	...	...	...	...	...	M.	Alive.	Died.	4¼	17	Vertex.	Natural.	½
24	Mrs. L.	30	2nd.	...	3	...	...	...	...	7½	F.	Alive.	Died on 3rd day.	4	17	Vertex.	Forceps in Walcher position.	4
25	Mrs. T.	24	2nd.	...	3¾	4½	...	...	...	...	F.	Alive.	Died in 1½ hour.	2¼	...	Breech.	Natural.	2
26	Mrs. W.	25	3rd.	...	3¼	...	...	...	...	7½	...	Alive.	Died in 12 hours.	4½	...	Vertex.	Natural.	...
27	Mrs. C.	32	3rd.	...	2⅞	3⅝	...	...	...	7	...	Alive.	Died in an hour.	2½	...	Shoulder & cord.	Version.	...
28	Mrs. C.	...	4th.	...	2⅞	3⅝	...	...	...	...	F.	Alive.	Died in 8½ hours.	$4\frac{1}{16}$	16	Shoulder.	Cephalic version, forceps.	4
29	Mrs. H.	34	4th.	...	...	..	...	...	...	...	M.	Alive.	Died in 5 hours.	5	18	Vertex.	Version.	5
30	Mrs. M'D.	29	5th.	...	2¾	3½	...	...	...	7½	M.	Alive.	Died in 5 hours.	4½	17	Vertex.	Natural.	3
31	Mrs. H.	30	6th.	...	3	3¾	...	...	...	8	F.	Alive.	Died next day.	5¼	18	Vertex.	Natural.	3
32	Mrs. R.	29	7th.	...	...	...	...	...	...	...	F.	Alive.	Died in a few hours.	5½	...	Shoulder.	Forceps, after cephalic version.	...

TABLE V.—TWENTY CASES WHERE CHILD WAS BORN ALIVE, AND LEFT THE HOSPITAL ALIVE.

33	Mrs. N.	27	1st.	...	2¾	3⅓	...	...	...	7½	M.	Alive.	Alive.	5½	17	Vertex.	Natural.	8
34	L. M.	26	1st.	...	3¼	4	...	...	...	8	M.	Alive.	Alive.	5½	18	Vertex.	Natural.	2
35	J. M.	22	1st.	...	...	...	...	9¾	10⅛	8	M.	Alive.	Alive.	7	18	Vertex.	Forceps.	3
36	Mrs. T.	23	1st.	...	3¼	4	6½	8½	10	8	F.	Alive.	Alive.	4	17	Vertex.	Forceps.	...
37	Mrs. T.	...	2nd.	...	...	...	...	...	...	...	F.	Alive.	Alive.	...	...	...	Version.	...
38	Mrs. W.	25	3rd.	...	3	3¾	...	...	...	8	F.	Alive.	Alive.	4¾	17	Vertex.	Natural.	3
39	Mrs. B.	26	3rd.	...	3	3¾	...	8½	9	8½	...	Alive.	Alive.	7	18½	...	Forceps.	...
40	Mrs. W.	26	4th.	...	3¼	...	...	...	...	8½	M.	Alive.	Alive.	7	...	Vertex.	Forceps.	3
41	Mrs. M'D.	...	4th.	...	2¾	3½	...	...	...	8	F.	Alive.	Alive.	6¼	18½	Foot.	Extraction.	...
42	Mrs. M'L.	26	4th.	...	3¼	4	...	...	...	8	...	Alive.	Alive.	...	...	Head & foot.	Version.	2
43	Mrs. R.	30	5th.	...	...	...	...	...	...	8½	F.	Alive.	Alive.	8	18	Vertex.	Natural.	1
44	Mrs. H.	28	5th.	...	3	3¾	...	...	...	8	M.	Alive.	Alive.	5	17	Vertex.	Natural.	3
45	Mrs. T.	27	5th.	...	3½	...	...	...	...	7½	F.	Alive.	Alive.	5	19	Vertex.	Natural.	2

24. *History*.—First confinement—at term, craniotomy.

26. For history, see Table V, Case 48.

27. *History*.—First confinement—forceps, child born dead; second—induction, version, child dead.

28. Same patient as Case 27.

29. Contracted pelvis. *History*.—First and second confinements—forceps, children born dead; third—induction at seven months, child died in a few hours.

30. *History*.—First, second, and third confinements—spontaneous premature labours (second and third completed by forceps), all children born dead; fourth—induction at eighth month, live child (see Table V, Case 41).

31. *History*.—First and third confinements—spontaneous premature labours, children born dead; second and fourth—craniotomies; fifth—induction at eighth month, live child (see Table V, Case 44).

32. *History*.—Sixth confinement—very difficult forceps delivery, when she had been advised by her medical attendant to come into hospital and have labour induced next time. No history of other confinements.

35. Pelvic outlet small; spinal curvature.

36. Spinal curvature.

37. Case 2, Table I.

38. *History*.—First and second confinements—difficult forceps deliveries of dead children.

39. *History*.—First confinement—forceps, child born dead; second—induction, child (4 lb.) died in seven days.

40. *History*.—See Case 48.

41. *History*.—First, second, and third confinements—spontaneous premature labours (second and third completed by forceps), all children born dead.

42. *History*.—First confinement—female child, born alive but died in six hours (patient had a tedious convalescence); second—child (girl) alive, still living; third—forceps, child (male) born alive, but died in a few minutes.

43. *History*.—Third and fourth confinements were difficult forceps deliveries, therefore her medical man advised her to come in for induction about a fortnight before full time.

44. *History*.—First and third confinements—spontaneous premature labours, children born dead; second and fourth—craniotomy. The sixth confinement is Case 31 of Table IV.

45. *History*.—First confinement—term, forceps at brim, child born dead; second—induction at eighth month, live child; third—term, version (with forceps on after-coming head), child born dead, high temperature throughout puerperium; fourth—induced at eighth month, live child.

INDUCTIONS OF PREMATURE LABOUR FOR CONTRACTED PELVIS (*continued*).

TABLE V (*continued*).—TWENTY CASES WHERE CHILD WAS BORN ALIVE, AND LEFT THE HOSPITAL ALIVE.

No.	NAME.	Age.	Confinement.	PATIENT.						Period of Pregnancy.	CHILD.					PRESENTATION.	METHOD OF DELIVERY.	Duration of Induction.
				Height.	True Conjugate.	Diagonal Conjugate.	External Conjugate.	Interspinous Diameter.	Intercristal Diameter.		Sex.	RESULT. At Birth.	RESULT. On Dismissal.	Weight at Birth.	Length.			
				Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Mos.				Lb.	Ins.			Days
46	Mrs. S.	...	5th.	...	...	...	..	...	...	8	F.	Alive.	Alive.	6½	19	Vertex.	Natural.	3
47	Mrs. B.	...	5th.	...	3¼	...	...	...	...	8	M.	Alive.	Alive.	6¼	17	Vertex.	Version.	4
48	Mrs. W.	...	5th.	...	3¼	...	...	...	...	8¼	F.	Alive.	Alive.	7	20	Vertex.	Natural.	3
49	Mrs. A.	...	7th.	...	3¼	4	6¾	9¼	10	8	...	Alive.	Alive.	5	17½	...	Natural.	5
50	Mrs. S.	29	7th.	...	3	3¾	6½	9¾	$10\frac{1}{16}$	8	M.	Alive.	Alive.	6¾	20	Vertex.	Version, after forceps failed.	...
51	Mrs. S.	37	13th.	..	3	3¾	...	...	...	8	M.	Alive.	Alive.	5½	18	Vertex.	Natural.	3
52	J. H.	25	3rd.	...	2½	3¼	6¾	9¾	10	7	M.	Alive.	Alive.	3½	16½	Vertex, cord.	Version.	6

46. *History.*—At her last labour, delivery effected with great difficulty, followed by a very tedious convalescence, therefore her medical attendant advised her to come in for induction.

47. *History.*—Previous labours at full time, all very difficult, completed by turning; children all living.

48. Same as Case 40. *History.*—First confinement—term, forceps, child alive; second—term, version, craniotomy; third—induced at eighth month, child (4½ lb.) died in twelve hours; fourth—induced at eight and a half months, child alive.

49. History indefinite. Chloroform in all her labours, forceps in one, others probably by turning.

50. *History.*—First confinement—craniotomy; second—induction at seven and a half months, dead child; third—induction at eighth month, child dead; fourth—induction at eighth month, forceps, child died; fifth—induction, child died; sixth—spontaneous premature labour at eighth month, difficult delivery, child alive, head grooved.

51. *History.*—First to eighth confinement—spontaneous premature labours, children dying not long after birth; ninth—induction at eighth month, living child; tenth—at term, craniotomy; eleventh—at term, difficult forceps delivery of live child, 7 lb.; twelfth—at term, forceps, severe pull, child born dead.

52. *History.*—First and second confinements—craniotomy.

GYNÆCOLOGY ONE HUNDRED AND FIFTY YEARS AGO.

By J. K. KELLY, M.D.,

Physician for Diseases of Women, Glasgow Royal Infirmary;
Lecturer on Gynæcology, St. Mungo's College.

"Autres temps, autres mœurs."

Jean Astruc was an old man of 77 when he published his book on *Diseases of Women;* and four years after, at the age of 81, he added other two volumes. He had long been a celebrated physician not only in France but throughout Europe, and he mentions in his preface that he was in a sense forced to publish his book by the appearance of imperfect versions of his teaching, one of which had been published in England.

He was no mere specialist—no "man-midwife" such as Fielding Ould described himself. His lectures on diseases of women were only part of his course of lectures on medicine at the Royal College of France. He had already written books on Venereal Diseases, Tumours and Ulcers, &c., and, though an old man, he looked forward to writing still other treatises on "Animastique," on "Diseases of the Head," &c., "si Deus vitam atque otium dederit." Nor was his range of study confined to medical subjects. His most famous book, perhaps, was one on *The original documents on which Moses founded the Book of Genesis* ("Conjectures sur les mémoires originaux dont il paroit que Moïse s'est servi pour composer le livre de la Genèse," 1753).

Astruc was not only Professor in the Royal College, he was also "Médecin Consultant" (Court Physician, we might say) to His Majesty Louis XV (Louis le Bien-Aimé). He was in high position, much esteemed and respected both by his confrères and by laymen.

The son of a Protestant clergyman, he had been an assiduous student from the first, and had been Professor at Toulouse and at Montpellier before he came to Paris. His studies had ranged over the whole field of medicine, while his large practice had familiarised him with the diseases "quae sunt quotidianae occursionis, which form the most important necessary part of medicine."

So far as can be gathered from his writings, he seems to have delighted in teaching. From his youth he had practised as a teacher, and taken as his motto the sentence of Seneca, which he was fond of quoting—"In hoc gaudeo aliquid discere ut doceam; nec me ulla res delectabit, licet eximia sit et salutaris, quam mihi uni sciturus sim." Well satisfied with his own opinions, for which he could give good reasons, and not without a sharp word on occasion, he was yet honestly open to new light, and always polite and courteous. There are many indications, also, of that kindly consideration for others which is the true mark of the "good physician."

Such being the position and character of the author, we may expect his book to represent the best teaching of the time. The part published in 1761 consists of four duodecimo volumes, and is divided into two books, the contents of which are noted below.[1]

The second part, published four years later, consists of two volumes treating of diseases connected with pregnancy and diseases of the breast. They are written in French with the exception of the chapter (Book I, chap. 12) "De Furore Uterino," in which, having to speak of matters too "shocking" to be mentioned in his native tongue, he was forced to write in Latin!

His theory of diseases of women he founds upon the structure and function of the uterus; and, after describing these, the rest of the book is an exceedingly clever discussion of the modifications they undergo in disease, each subject being regularly treated under the separate heads of description (definition), causes, symptoms, diagnosis, prognosis, and treatment, just as in books of the present time. But while the form is similar, everything else is strongly contrasted. It is not easy for the reader to transport himself back one hundred and forty years, and realise and live amid the ideas that were current then. We find men with the same eyes, the same senses, the same appetites and aspirations, and not less intelligence and mental acumen, but their environment is entirely different. Their facts of observation are rarely facts to us. Still more seldom do their ideas correspond with those current now. The world has changed, and men look out on a new universe which has little in common with the world that Astruc saw from Paris in the middle of the eighteenth century. Especially in medical science the basis of ascertained facts and the theories regarding these have been revolutionised since that time, and to read these books is like studying the geological records of an extinct race.

---

[1] BOOK I.

On the Diseases of Women caused by Menstruation.

CHAP.

1. The Structure of the Uterus.
2. Menstruation.
3. The first appearance of Menstruation, and the Accidents that precede and accompany it.
4. Suppressed or Diminished Menstruation (Amenorrhœa).
5. Menses retained by some Malformation.
6. Difficult and Laborious Menstruation (Dysmenorrhœa).
7. Deviated Menstruation (Vicarious Menstruation).
8. Pale Colours, or Chlorosis.
9. Excessive Menstruation and Losses of Blood (Menorrhagia and Metrorrhagia).
10. White Discharges (Leucorrhœa).
11. The Menopause and the Accidents it may involve.
12. De Furore Uterino seu *Μητρομανία*.

The peculiarity of the uterine structure is the arrangement of its blood- and milk-vessels. At the places of anastomosis of the veins arising from the capillaries little appendices pass off, to terminate by a *cul-de-sac* on the inner surface of the uterus. These appendices are best seen in pregnancy, when they enlarge greatly and enter the substance of the placenta.

BOOK II.

On the Diseases of Women which depend on the state of the Womb.

CHAP.
1. Inflammation of the Womb.
2. Gangrene or Sphacelus of the Womb.
3. Aposteme or Abscess of the Womb.
4. Ulcer of the Womb.
5. Scirrhus of the Womb.
6. False Scirrhus or Steatoma and Sarcoma of the Womb.
7. Cancer of the Womb.
8. Dropsy of the Womb.
9. Tympanites of the Womb.
10. Descent of the Womb.
11. Diseases related to Descent of the Womb—
    - (*a*) Sarcoma or Growths of the Vagina and Elongation or Descent of some part of its Internal Wall.
    - (*b*) Inversion of the Womb.
12. Diseases of Ovaries and Tubes.
13. The Hysterical Passion or Uterine Suffocation.

The greater part of Vol. IV is occupied by a chronological table of the authors who have treated specially of diseases of women.

Their extremities then open and pour the blood into the cells of the placenta, from which it passes into the umbilical veins of the fœtus.

The milk-vessels are arranged in little groups of four or five vessels, each group converging into a central canal which ends on the inner surface of the uterus. These vessels embrace the small veins in all directions, so that when they fill they compress the veins, and when the veins fill they are compressed. These milk-vessels also enlarge in pregnancy, and then their milky contents can be easily seen, and are destined to escape from the vessels and to nourish the fœtus *in utero*, as the milk in the breast nourishes the child after birth. At other times their contents are less milky—almost pure lymph—and are carried away by the lymphatics. A rough diagram makes this arrangement easy to understand.

Such being the arrangement of vessels beneath the inner nervous or tendinous tunic of the uterus, the flow of menses is produced by the gradual accumulation of milk in the milk-vessels until a stage is reached when they press so strongly upon the veins that the venous appendices swell, and finally open at their extremities so as to give exit to the blood, their swelling again reacting upon the groups of milk-vessels, so that they also open and give exit to the milk. The mixture of blood and milk thus produced forms the menstrual discharge, and this discharge naturally ceases when the vessels which have mutually compressed each other are emptied of their excessive contents.

Once this process is thoroughly understood it is merely a dialectic exercise to explain the diseases connected with menstruation which are the subject of the first and second volumes of Astruc's work.

Take menorrhagia for example. In menorrhagia, the menses (1) recur too often, (2) last too long, or (3) flow too abundantly.

1. The menses recur too often because (*a*) the milk-vessels fill too rapidly, or (*b*) the venous appendices dilate too easily, or (*c*) the blood puts too great a strain on the appendices and forces them to dilate too often, or (*d*) two of these causes may act together, or (*e*) the whole three may act together.

The reader may be left to work out the causes of (2) and (3) in the same fashion.

Each of these propositions again is taken up and discussed by itself, thus—

1. (*a*) The milk-vessels fill too rapidly when women eat much, especially of succulent food, as rich women do: when they lead an idle and sedentary life, as women do in town;

when mothers put away their milk, and stop nursing too soon while their milk is still abundant. (*b*) The appendices dilate too easily when their walls are naturally too soft and relaxed, as in women of delicate constitution; when they are exhausted by leucorrhœa; when they have been racked by severe labours, abortions, or extractions of the placenta; or when they are half eaten away by some ulcer of the womb. (*c*) The blood puts too great a strain upon the appendices when it is too abundant, as in true plethora, which results from too much food and too little exercise; when it is too rarefied, as in false plethora; or when it circulates with too great rapidity, as in women who feed on acrid, spiced, succulent foods of high flavour, who drink spirituous liquors, take violent exercise, sit late, are subject to violent passions, or are exposed to some acute fever.

In this way the whole book is worked up into a harmonious whole. Nothing is left unexplained or unaccounted for, and the imperfect physiology of the time is so dexterously applied to the most puzzling conditions, that we could almost believe that the learned Astruc was Mr. Lemuel Gulliver himself. On a small basis of fact—alas, often only supposed fact—the logical faculty is used to raise a superstructure of theory, which must, at any cost, harmonise with itself. Looked at from our standpoint, it is like the hypothetical construction of an animal or class of animals from the examination of a single bone or of the print of a foot—a very large deduction from small premises. To Astruc himself, however, both the fact and the theory are indubitable.

Thus, keeping still to menstruation, what could be more ingenious, and, at the same time, more convincing, than the explanation of the variations in quantity? Some women have a freer discharge every second menstruation and others every third menstruation, because some of the appendices do not open except on the second or on the third occasion of menstruation, the pressure upon them before that time being insufficient owing to the slow filling of the milk-vessels that are associated with them. Or than the explanation of the leucorrhœa that sometimes precedes and sometimes follows the menses? This is due to the milky discharge which should naturally flow away with the blood, in the one case escaping before and in the other continuing after the blood has escaped from the appendices. Or than the explanation of the absence of menses during lactation, the milk being then directed wholly to the breasts, and none at all or very little to the milk-vessels of the uterus?

Is not the easy explanation of all difficulties simply a proof of the truth of the theory?

Take again the considerations connected with the blood. The blood which is normally "laudable and healthy" can be spoiled in many ways. The immoderate use of solvent remedies can dissolve it. It may become acrid so as to eat through the blood-vessels. It is thickened by cold and expanded by heat, and is therefore thicker in winter than summer. "Scrofulous leven" thickens it. Sleep thickens it. Narcotics divide and attenuate it. In spring and autumn all the humours become more fluid. When the blood is rarefied it fills the vessels too full, and discharges are apt to result. When the milky lymph is not removed the blood becomes gorged by it, and the secretions, such as the saliva and the leven of the stomach, are spoiled. In persons of a bilious temperament the blood is acrid and dry. The blood, in fact, is the carrier of disease, and when tainted should as far as possible be removed from the body. Hence the great remedy of those days was bleeding.

Bleedings were practised to remove superfluous blood when the menses were absent or diminished in quantity. On the other hand, when the menstrual flow was excessive, bleedings again were the remedy to divert the blood away from the uterus. Bleedings were always to be practised when the blood was "spoiled" in any way. And you must not be timid in resorting to the remedy. "It is better to make two bleedings that are not required than to omit one that is necessary." And you must not be too sparing in the amount. When, for example, a woman seems in danger from menorrhagia you should bleed from the arm four or five times in the first twenty-four hours, and at each time take 12 or 15 oz., unless there are very strong reasons against it. Don't allow the fears of onlookers to stay your hand.

But in bleeding you must discriminate. You must not bleed from the arm in amenorrhœa, because then you divert blood from the uterus; nor from the foot in menorrhagia, because then you attract blood to the uterus. It is a gross and unpardonable mistake to err against this principle.

Marcello Malpighi had discovered the blood corpuscles a hundred years before, and, more recently, Antony van Leeuwenhœck had examined them with his famous lenses and described their form, but the most important constituent of the blood is the lymph. A wound, for example, will not heal if the lymph is acrid and salt, because it is then unsuited to unite torn vessels. It is a sweet viscous lymph which promptly unites the separated parts. The lymph forms by its thickening and aggregation many of the tumours to which the uterus, like other organs, is liable. The wall of a cyst, indeed, is nothing else than the tunic of a lymphatic vessel which has gradually dilated until sometimes it reaches a monstrous size. When a cyst is recent its contents are more fluid, but when old they thicken and harden. When the blood is almost pure lymph, as in chlorosis, almost every function in the body must be disturbed. The milk which should be discharged from the uterus by the menses is retained in the blood and mixes with the saliva and the gastric juice, so that ordinary healthy diet is refused, and charcoal, cinders, plaster, vinegar, &c., are desired. The other secretions also, especially those from the liver, pancreas, spleen, and mesenteric glands, which are naturally thick, become more so and produce obstructions in these organs. The shortness of breath in children is due to the crowding of the blood in the lungs.

Sensations are excited by the animal spirits which course along the nerve filaments to and from the brain. When a part is becoming gangrenous it loses all feeling, because the nerve filaments then cease to oscillate, and it is the oscillation of the filaments that sets the animal spirits in motion. It is in the brain that the animal spirits are separated from the blood, and the less blood there is sent to the brain the less animal spirits can be separated; hence the feebler the circulation the less the quantity and speed of the animal spirits, and the less the muscular power which depends upon their speed and amount. There you have the explanation of swoons. Frightful dreams also are due to these spirits being sent back with violence to the brain from an impression on some part of the body, such as the uterus, *e.g.*, during menstruation. The tension of the womb when congested is kept up by the rapid course of the animal spirits, and one method of relieving that tension is, therefore, to give narcotics to check their speed.

But we must pass from these speculative regions to something more tangible. In the region of diagnosis we find a beginning of physical methods. From of old the urine had been examined, and a distinction is made between urine mixed with leucorrhœal discharge, and therefore cloudy when passed, and urine which is clear when passed, and becomes cloudy and thick on cooling. Examination of the menstrual discharge is also of importance. In dysmenorrhœa, *e.g.*, when it does not penetrate the napkin the dysmenorrhœa is due to thickening of the blood; when it does, it is due to some defect in the venous appendices. By the same method of examination you can distinguish the different kinds of leucorrhœa. The "speculum uteri" is used to examine the vagina and cervix, "to judge by the eye of what touch fails to decide." The method now called "bimanual" of examining the pelvic contents is recommended. In examining a tumour "it is sometimes necessary (after examining the hypogastrium) to carry the finger *per vaginam* up to the uterus to determine its condition. It is even necessary when the tumour is small to push the uterus up against the hand applied over the hypogastrium to distinguish better the resistance and size of the tumour."

Fluctuation is recognised as a sign of fluid. In ascitic dropsy (a dropsy of the womb from the collection of lymph in its cavity), "when you strike upon one side of the uterus you feel the stroke upon the opposite side, if the hand is placed there. This is what is called, rather improperly, fluctuation, and which ought rather to be called 'contre-coup,' in Greek ἀντιτυπία. This 'contre-coup' comes from the continuity of the column of fluid which stretches from one side of the uterus to the other in this species of dropsy. This 'contre-coup' is not felt in hydatid dropsy" (the other kind of dropsy to which the uterus is liable), "because the column of fluid is interrupted by the separate vesicles or hydatids which break the force of the stroke and prevent it from reaching the other side."[1]

Percussion is constantly used to distinguish the dull sound of "dropsy" of the womb from the clear sound of "tympanites" of the womb. Menorrhagia and metrorrhagia are distinguished. A wise rule is laid down "to distrust the menses that persist after the age of 50." The movements of the fœtus *in utero* are the only sure sign of pregnancy. The entrance of pus into the circulation is recognised as a cause of fever. Hystero-epilepsy is well defined, and this very name (épilepsie-hystérique) accepted with some reserve. Adhesions of tube and ovary resulting from a puerperal "phlogosis" are compared to adhesions of pleura and lung. Inversio uteri is compared to intestinal intussusception, and its cause is clearly defined.

It is, perhaps, when we come to the treatment of diseases of women that we enter the region most strange to us. Here we find lists of remedies drawn from all the three kingdoms of nature, each supposed to be appointed by Providence for some special purpose, and this purpose in many cases is well known and thoroughly relied upon. It is of tremendous importance to use the proper drugs. If you use emmenagogues, *e.g.*, when amenorrhœa is due to the approach of the menopause, you may bring on inflammation or ulcers, or even cancer! Strange drugs are recommended by some. Asses' excrement, for example, as a pessary, as an injection, or even made up into a syrup! or the placenta of a primipara dried in the stove and powdered! or menstrual blood, or calcined human bones, or powdered emeralds, &c. But these remedies are not recommended by Astruc. Of such as these he says, "Plura refero quam credo." But the list of which he approves is itself a long one, and includes purgatives, diuretics, emetics, errhines, diluents, humectants, antiphlogistics, astringents, and other classes of drugs, made up in decoctions, infusions, tinctures, boluses, tablets, or applied as fomentations, plasters, ointments, baths, enemata, &c. The constant return to bleeding, purgation, injection, was ridiculed by Molière a hundred years before—

---

[1] *Note.*—This is a good example of the mixed "observations" of that time. Astruc himself says, "Nothing is more difficult than to observe well, and nothing is rarer than a good observer." We have here an excellent distinction between unilocular and multilocular cysts, but while their characters are distinguished, their situation is referred to the uterus!

> "Clysterium donare.
> Postea seignare.
> Ensuita purgare.
> Reseignare, repurgare et reclysterisare!"

but the ridicule had evidently not changed the practice. Except in bleeding, which, as we have seen, he recommends most strongly, and which sometimes, as at the menopause, should be continued at regular intervals for a year, or even two years, Astruc may be called a cautious, and even sometimes a timid, therapeutist. He does not believe in such absurdities as the use of oil of Jupiter dropped upon the umbilicus for hysteria. He is most careful in the use of powerful drugs, such as corrosive sublimate, hemlock, &c. He is not like charlatans and empirics, of whom he says, "it is known that their temerity equals their ignorance." His opinion is that a wise man will not be the first to use new remedies, while he must not be the last to profit by them when they are proved useful. But he is seldom sceptical of the old remedies which have the sanction of tradition.

In our day, gynæcology is chiefly a department of pure surgery, but one hundred and forty years ago the surgery of the pelvis was not known. Operations could, indeed, be done at the vulva, and even, with great circumspection, in the vagina, but not at all in the uterus. Wounds at the orifice and cervix of the uterus may be fatal, and are almost always so, and no surgeon can be sure of handling his knife safely in the depth and obscurity in which the cervix lies. Tumours accordingly can be removed by knife or scissors when situated in the vulva and vagina, but tumours of the uterus are incurable. And such operations as can be done must never be undertaken without bleeding and purging the patient for some days before.

In Astruc's time incision for imperforate hymen had displaced the use of escharotics for the destruction of the occluding membrane. The "troiscarts" is used to evacuate dropsy of the ovary or Fallopian tube through the hypogastrium, but is safe only when the cyst is adherent to the abdominal wall. Scarification is practised even at the os uteri when this is accessible either in prolapse or by use of the speculum. A dropsical uterus may sometimes be emptied by a hollow sound introduced through the cervix as a catheter is introduced into the bladder. When an abscess is present in the vulva it is incised by lancet or bistoury in the most dependent part; when in the vagina, a guarded bistoury may be used: but when in the uterus it cannot be opened except by exciting movements such as press or shake the uterus, viz., sneezing, vomiting, coughing, straining at stool, &c. The use of escharotics, of issues, of dry cupping is too slow and uncertain to be recommended when incision is possible, but may be resorted to in other cases.

Amid all this surgical timidity it is almost startling to light upon a suggestion of abdominal section for tubal pregnancy. "This operation in which the tube only is incised would be much less dangerous than if the uterus had to be incised." It is almost as surprising to find extirpation of the uterus proposed in gangrene, or scirrhus, or cancer of the prolapsed organ, although the stringent rule is laid down that this operation must never be practised except in desperate cases, "in evidenti mortis periculo."

The minor gyæcology consists mostly in washing out the uterus with a suitable syringe and tube, which a midwife can be taught to use; in steaming the uterus while the patient sits in a "chaise percée," the steam being led into the vagina, and even into the uterus, by a suitable tube, but in this case care must be taken that the steam is not too hot; in the use of medicated pessaries made, *e.g.*, with leaves boiled and cut small or beat into a paste and wrapped in thin cloth; in using an abdominal bandage for tumours, &c.

Pessaries as we have known them in this century are represented by the "cercle utérin" which is used in prolapse. "This ring is a sort of oval cake made of green wood, pierced in the centre with a hole large enough to allow the discharge of the menses, flat or convex on the one side and slightly concave on the other. Its size must be suited to that of the vagina in which it is placed, with its long diameter transversely and with its concave surface towards the uterus. It is coated with wax so as to have a smooth surface, and, before introduction, is dipt in oil or fresh butter."

Gynæcology, perhaps even more than other departments of medicine, had made little progress for many centuries. The conditions of progress, indeed, hardly existed in Astruc's time. The rapid changes that have characterised the short period since then, and especially the last thirty years, have been due to the development of our methods of research as to what exists, in abandonment of the method of logical deduction as to what ought to exist. The advance has been rapid since we entered the right path, but, far as we have gone, we are no doubt still far from the goal, and the reviewer of one hundred and fifty years hence may find our position as strange and antiquated as we to-day find that of Astruc.

GYNÆCOLOGICA.

BY THOMAS W. JENKINS, M.A., M.D.,

Surgeon for Diseases of Women to the Victoria Infirmary Dispensary, and Assistant Surgeon to the Hospital.

I. *Two cases of rupture of the uterus, one during labour, the other of traumatic origin.*

In December, 1890, when residing in the lying-in hospital of Prague, I had under observation a case of incomplete rupture of the uterus, and published a report of the same in this *Journal* in March, 1891. Since then, three cases of rupture of the uterus have come under my notice, one, still unreported, due to a large fibroid tumour which proved an insuperable obstacle to labour, the mother dying undelivered, the other two those I am about to describe.

CASE 1.—On 10th December, 1898, I was called to the country to see a patient who had been delivered that morning, after very considerable difficulty, of a dead child. Her pelvis was contracted, and on a former occasion labour was similarly protracted and difficult, and the child was born dead. An attempt had been made to deliver by forceps, but that failed.

Version was then performed with comparative ease, but perforation was necessary before delivery could be effected.

The fact that all this took place without anæsthesia, and without any evidence of great suffering on the part of the patient, speaks for the careful manner in which the operations were performed.

The accoucheur thought fit to remove the placenta. Introducing his hand, he found the tips of his fingers on the under surface of the liver before he realised what had happened. The placenta was in the uterus, and was easily removed; free, but not excessive, hæmorrhage followed; there was no collapse and no pain.

At noon the patient's temperature was 97° F.; the pulse, 120. At 9 P.M. she was complaining of a good deal of pain; the abdomen was everywhere tender to pressure, and slightly distended; pulse, 120; temperature normal.

The size of the rupture and the intra-abdominal manipulations seemed to indicate abdominal hysterectomy as the only therapeutic procedure.

I opened the abdomen and found a considerable quantity of fluid and clotted blood in the cavity, and a large irregular gaping wound of the whole anterior wall of the uterus just above the level of the peritoneal reflection. I amputated the uterus, bringing the cervical pedicle into the lower angle of the abdominal wound, and by free irrigation removed all traces of blood from the abdominal cavity. The patient bore the operation well, and next day her condition was all that could be desired, but on the following day she raised herself slightly in bed and suddenly expired.

I narrate this case because it shows very vividly that rupture of the uterus may happen without a single symptom to suggest the occurrence of such a catastrophe, and to point out that a rupture which involves the whole anterior wall may be quite unrecognisable by external palpation. Where the rupture is unilateral, as in the case I previously described, diagnosis is facilitated by the great displacement of the fundus uteri, the organ contracting towards the opposite side. Had the accoucheur in the present instance not passed his hand through the opening, rupture of the uterus would never have been suspected, and sepsis supervening—practically inevitable under the circumstances—the case would have passed as one of puerperal fever.

While hysterectomy, both vaginal and abdominal, has been recommended in such cases, I think a wiser procedure would be to open the abdomen, irrigate and rid the cavity of all traces of hæmorrhage—infection is otherwise almost unavoidable—and close the peritoneal wound, trusting to drainage *per uterum*; or, still better, to suture the upper peritoneal margin of the wound to the serous coat of the bladder, thus making a new reflection, open the anterior cul-de-sac, and drain *per vaginam*.

CASE 2. *Dilatation of uterus after incomplete abortion—Extensive rupture into left parametrium—Sequelæ.*—In June, 1897, Mrs. M'C., æt. 30, aborted at the third month. The fœtus alone was expelled. Recurrent attacks of hæmorrhage called in the course of a week or two for evacuation of the retained contents. Dilatation was necessary. A metallic *glove-stretcher* was used by the physician, but without violence. Suddenly a loop of intestine appeared in the vagina, and then there was tremendous hæmorrhage. The patient was under chloroform, which was being administered by another practitioner, who also vouches for the prolapse of intestine through the uterus. The operator had sufficient presence of mind to push back the intestine and pack the vagina, and convey the patient after a short interval to the hospital. Dr. Parry there found a large tear of the left wall of the uterus and parametrium, and free hæmorrhage which necessitated opening of the anterior and posterior fornices and application of clamp forceps to the left broad ligament before it could be stayed.

The patient did well, but after a little time began to complain of constant pelvic pain.

In August, 1898, more than a year after the accident, I was called to see her in consultation with her medical adviser, and found a large cicatrix in the vagina, a deep laceration of the cervix extending into the left parametrium, and slight fixation of the uterus. Examination under chloroform failed to give any information as to the state of the left adnexa.

In the hope that the pain might be caused by the vaginal and cervical anomalies, I excised the cicatrices, freed the portio vaginalis from the left fornix, repaired the laceration in the cervix, and reclosed the opening in the vaginal roof, thus restoring the mobility of the uterus.

Again the patient did well, but two months later the pain returned, and became so constant and severe that further intervention was demanded.

On the 2nd December, assisted by Dr. A. Roxburgh, I opened the abdomen. The omentum was adherent at several points to the bladder and the small intestine. There were also numerous fine adhesions between coils of intestine, and between the posterior surface of the uterus and left broad ligament and the pelvic wall. Beyond a slight thickening close to the left margin of the uterus, there was no trace of the original lesion, and no evidence that a clamp had been applied to the broad ligament.

The adhesions, which were very vascular, were ligatured and cut, and the parts freed.

The patient made a good recovery, and has since been quite free from pain.

Although well known, it is doubtful if it is sufficiently realised that severe and constant pain may attend apparently insignificant peritoneal adhesions. I can recall one patient, whose health was completely broken down by pain and dysmenorrhœa, in whom operation revealed nothing but a thin adhesion between intestine and ovary, and very great amelioration followed its removal.

Another point calling for remark is the extraordinary softness of the uterine tissue after abortion or labour. This, of course, refers especially to the body of the uterus. It is no exaggeration to say that instrumental perforation may occur under these circumstances without any appreciation of resistance by the operator. It may be necessary to experience this in order to believe it. The following case is again in point:—

II.—*Prolapse of uterus and cystocele in a contracted pelvis —Sterilisation, vagini-fixation of the uterus, anterior and posterior colporrhaphy—Perinæorrhaphy.*

CASE 3.—Mrs. S., æt. 35, was sent to me in December, 1897, by Dr. Matthew Dunning with a view to operation for prolapse of the uterus, large cystocele, and extensive rupture of the perinæum. The discomfort from the widely-gaping vulva was very great. Pessaries had proved useless.

The patient's obstetrical history was decidedly bad. Pregnancy had gone on to term on three occasions; but, owing to contraction of the inlet, labour was always extremely difficult, and perforation of the fœtal head was each time necessary before delivery could be accomplished. Prolonged illness had followed the last confinement, and Mrs. S. was very unwilling to incur more risks on that head. As a matter of fact, she was pregnant when I saw her. In the light of what had happened, the patient, Dr. Dunning, and myself were of opinion that the pregnancy should first be brought to an end. This being done, I proceeded three weeks later to operation, and to prevent the likelihood of further conception I determined, the permission of the patient and her husband having been first asked and obtained, to ligature and divide the Fallopian tubes from the vagina—in the course of the operation for prolapse—just as described by Kehrer, of Heidelberg, in the *Centralblatt für Gynäkologie,* No. 31, 1897, under the name of *sterilisation by division of the tubes through an anterior vaginal incision.*[1]

Operation.—A large oval flap of mucous membrane having been removed from the anterior vaginal wall, the bladder was separated from the cervix uteri, and pushed up into the abdominal cavity. The peritoneum was then opened, and, to bring the fundus uteri into the wound, for the uterus was lying in retroversion, I introduced a sound. No force was used, nor was such necessary; yet, without my being conscious of any perception of resistance on the part of the tissues, the instrument projected fully 2 inches through the anterior wall before I realised that perforation had occurred. Attention has often been called to the extraordinary softness of the uterine tissue after abortion and childbirth, and that it cannot be too well borne in mind is well illustrated by this and the preceding case. In this instance no bad effects followed, but reposition of the uterus by means of a volsellum fixed to the anterior wall just beneath the fundus had to be effected with great care in order to avoid laceration. Thereafter to bring first one tube then the other into the vagina, ligature each in two places, and divide between the ligatures, offered no great difficulty.

Sterilisation accomplished, I got rid of the prolapse by fixing the uterus to the anterior vaginal wall by three sutures passed close to the margins of the vaginal wound, and through the substance of the uterus (*vagini-fixation of the uterus*). All that remained to do was to complete the closure of the wound in the anterior vaginal wall, to diminish in a similar way the surface of the posterior wall, and to restore the perinæum. Primary healing was obtained, and the patient has since enjoyed perfect health and remained sterile.

III.—*Two cases of complete prolapse of uterus and vagina in nulliparæ.*

CASE 4. (*a*) *Vagini-fixation of uterus—Colporrhaphy, &c.—Subsequent pregnancy.*—R. T., æt. 23, was admitted into the Victoria Infirmary on 20th January, 1897, on account of complete prolapse of uterus and vagina. She could not give any account of the affection beyond that it had gradually developed. She had not been pregnant.

---

[1] "Sterilisation mittels Tubendurchschneidung nach vorderem Scheidenschnitt;" *cf.* also No. 40 of same journal.

On 1st February I operated as follows:—(1) Curettage; (2) colpotomia anterior—longitudinal incision from beneath meatus urinarius to anterior lip of cervix, and reflection of two flaps of mucous membrane, which were afterwards resected; (3) opening of peritoneum between uterus and bladder, and rotation of fundus uteri into wound; (4) fixation of uterus to vaginal wall by two sutures passing through the substance of the uterus 1 cm. beneath the fundus; (5) closure of wound in anterior vaginal wall; (6) extensive perinæorrhaphy.

All the wounds healed by first intention, and the patient was dismissed on the 23rd February.

A few weeks ago, as I learned from Dr. Jardine, this patient was delivered of a child at term in the Maternity Hospital. On admission the bladder was greatly distended, but that was caused simply by pressure of the child's head. Labour was in all respects normal, and there was no laceration of vagina or perinæum.

Case 5. (*b*) *Complete prolapse of uterus and vagina, with remarkable hypertrophy of the portio vaginalis entailing stenosis of the cervix and pyometra.*—J. G., æt. 21, came to the Victoria Infirmary Dispensary in December, 1898. The only history she could give was that about two years ago, "after a heavy day's washing," a tumour suddenly appeared at the vulva. Menstruation has been irregular, but not painful. At times there is an ill-smelling discharge.

In addition to complete prolapse of uterus and vagina, there was great hypertrophy of the portio vaginalis, and the os externum was closed. It was possible to introduce a sound, but only after overcoming a distinct obstruction. The instrument then passed into a greatly dilated cavity, and its withdrawal was followed by the discharge of two or three drachms of very ill-smelling pus.

The patient came into hospital for operation, but, becoming dissatisfied, left of her own accord before anything was done.

Complete prolapse of uterus and vagina in nulliparæ seems to be rare. According to Stepkowski,[1] only twenty or thirty cases of the kind have been recorded. Neugebauer has not met with more than seven examples in 28,000 gynæcological cases. Many theories have been advanced to explain the occurrence, but the common elements would seem to be excessive intra-abdominal pressure and general muscular weakness.

---

[1] *Révue de Gyn. et de Chirurg. Abdom.*, vol. ii, p. 791.

Hypertrophy of the cervix is often seen in cases of prolapse, especially in subjects who have borne children; but I cannot find any account of such a case as the foregoing, where the hypertrophy actually caused stenosis of the os externum, and brought about the development of a pyometra.

CASE OF INTESTINAL OBSTRUCTION—VOLVULUS AND INTERNAL HERNIA—SUCCESSFULLY OPERATED ON.[1]

BY G. RITCHIE THOMSON, M.B., C.M., F.R.S.E.,

Assistant Surgeon, Glasgow Royal Infirmary; Extra Honorary Surgeon,
Royal Hospital for Sick Children, Glasgow; late Senior Assistant
to Regius Professor of Surgery, University of Glasgow.

THE relative rarity of recorded cases of successful operation for intestinal obstruction due to volvulus of the sigmoid flexure induces me to bring before the Society the following case, which exhibited a feature of unusual interest in that there was also present a hernia in the recto-vesical cul-de-sac.

J. S., a labourer, aged 70, was admitted into Ward 22 of the Glasgow Royal Infirmary on 26th October, 1898, having been sent from Hamilton as a case of acute intestinal obstruction.

Until the onset of his present illness he had enjoyed good health, and never had rupture nor suffered from habitual constipation.

Nine days ago a pain came "like a knife" across the abdomen, a little above the umbilicus, and since then a dull, constant pain, with occasional exacerbations, has continued in that region.

He has had constant desire to go to stool, but has not passed anything, and is quite emphatic that not even flatus has passed for nine days. Vomiting has occurred daily, the pain having been slightly relieved on each occasion.

Physical examination.—The abdomen is uniformly swollen and tense, and gives generally a feeling of increased resistance, which is most marked in the umbilical region. There is no

[1] Shown at a meeting of the Glasgow Medico-Chirurgical Society held on 21st April, 1899.

visible peristaltic movement. Percussion yields a tympanitic note all over the abdomen. The right inguinal canal is slightly more patent than normal, but there is no evidence of hernia. Digital examination of the rectum yields negative results, but on trying to give an enema very little fluid can be introduced, and that little is almost immediately ejected. The lungs and heart are apparently normal, and there is little evidence of "shock." The temperature is slightly sub-normal.

On the following morning (27th October) I was asked by Dr. Knox to examine the patient, but was unable to add anything to the information elicited by Dr. Brownridge. The patient had vomited several times since admission, and the distension and abdominal pain had increased, while, in spite of repeated enemata, the obstruction had continued absolute. Operation was therefore decided upon, no diagnosis other than that of complete obstruction of the lower part of the sigmoid flexure having been made.

Operation.—The same afternoon the patient was anæsthetised, and, in Dr. Knox's absence, I performed median abdominal section, with the assistance of Drs. Patrick and Brownridge. The parietes having been divided, and the peritoneum incised, the large intestine immediately presented, and was found to be distended to about three times its average circumference. The distended gut was traced downwards and towards the left, and was felt to become suddenly constricted over the left common iliac artery. Below or to the right of this constricted portion a second similar portion of gut was felt and traced upwards and to the right. This rapidly became distended, and was found to be continuous with the intestine first exposed, so that it was evident that the condition was a volvulus of the sigmoid flexure. An unsuccessful attempt was made to undo the twist without bringing the loop out of the abdomen. On withdrawing the loop from the abdominal cavity it untwisted itself almost spontaneously, and was found to have been rotated from right to left. Towards the end of this manipulation a slight slip was felt, and immediated thereafter a strong fæcal odour was perceived, so that Dr. Patrick and I jumped to the conclusion that the gut had given way at the site of constriction. Careful search showed, however, that the colon was intact and quite free from exudation; but, on following it downwards, instead of it becoming directly continuous with the rectum, the lower part of the sigmoid flexure formed a loop, which was lodged in front of the rectum in a pouch, the orifice of which admitted the tips of two fingers. This loop was withdrawn by gentle traction, and the pouch was then found to admit the fingers for some distance, and to expand considerably just within its orifice. A considerable quantity of flatus was passed at this stage *per viam naturalem.*

To prevent the recurrence of hernia into the pouch, its anterior margin was sutured with catgut to the anterior wall of the rectum, which constituted its posterior boundary. As there was no apparent tendency to retwisting of the upper portion of the sigmoid, no measures were adopted to obviate this contingency. The abdominal wound was united by a single series of interrupted silk sutures including all the layers.

Further course: 28th October.—The patient passed three copious motions and much flatus. The abdomen is quite flat, and the temperature is normal.

18th November—Dressed for the first time. Wound quite healed. Stitches removed. Bowels moved daily.

24th November.—Patient dismissed quite well.

21st April, 1899.—The patient was shown at the meeting. He has been in perfect health since leaving hospital. The abdominal cicatrix has yielded slightly, so that, at its lower end, a slight impulse on coughing can be detected between the recti. There is no actual ventral hernia.

Remarks.—Volvulus is admittedly rarely diagnosed, and this case presents no exception, as I expected to find under chloroform a carcinomatous mass occluding the sigmoid flexure directly or by pressure, and it was only when no such mass could be detected that I decided to perform an exploratory median section instead of colotomy, which I had anticipated.

Wahl's pathognomonic condition—a circumscribed area of tympanitis corresponding to the location of the twist, and caused by gaseous distension of the twisted loop—was not recognised, and, I believe, was not present, because of the long duration of the obstruction which caused general intestinal distension, and thus masked the special distension which is said to occur in the affected loop as the result of interference with the circulation. In this case the twist was sufficiently tight to occlude the gut lumen at two levels, but was not so tight as to interfere seriously with the venous return, a condition which also accounts for the complete absence of peritonitis, which is so marked and early a complication in cases of volvulus.

The absence of peritonitis and of venous engorgement explains the ease with which the volvulus was untwisted, and also the fortunate absence of any tendency to recurrence of the rotation.

The most interesting feature of the case appears to me to be the co-existence of the hernia in the recto-vesical cul-de-sac. This struck me as so unusual, that, after removing the sigmoid loop from the pouch, I asked Dr. Patrick to introduce his finger into the cavity in order to verify my observation. The orifice of the "hernial sac," for such it was, was constricted, but not to the extent of causing strangulation of the contained intestine.

With regard to the anatomical anomaly or pathological change by which the ordinary wide-mouthed recto-vesical pouch, usually containing small intestine, was replaced by a deep pyriform fossa with a comparatively narrow orifice and containing sigmoid flexure, I can offer no very adequate explanation, and I will greatly appreciate any expression of opinion from the members of the Society. In my by no means exhaustive survey of the literature of internal hernia, I have discovered no description of a similar condition. The lateral boundaries of the fossa were, I think, the posterior false ligaments of the bladder, and the presence of an enlarged prostate may have so raised their anterior attachments as to form an unduly deep pouch; but in the complete absence of any sign of old peritonitis, I cannot explain the mesial approximation of these ligaments anteriorly to a degree sufficient to form the well-defined crescentic anterior boundary of the pouch.

In the female, incarceration of intestine in the pouch of Douglas is easily understood, and I have, with the assistance of Drs. Howat and Riddell, operated for acute obstruction due to such a cause, but in that case pelvic peritonitis and pelvic abscess were present, and the small intestine supplied the strangulated loop.

The hernia, I believe, was present in this case before the volvulus, and its lumen having become blocked, it gave rise to the volvulus, of which, according to Grawitz, the immediate cause is an accumulation of intestinal contents above a constricted portion of intestine.

To account for the presence of the lower portion of the sigmoid flexure in the hernial sac while the upper part formed the volvulus, I must revert to the old description of the flexure, which, I take it, was in this case a Sigma bi-loop, and not an Omega loop. The distal segment of the Sigma formed the hernia: the proximal loop became rotated and constituted the volvulus; and the meso-sigmoid, having a broad attached base, and not being of undue length, permitted sufficient rotation to cause complete mechanical obstruction, but not true strangulation.

CURRENT TOPICS.

GLASGOW UNIVERSITY CLUB OF LONDON—DINNER TO SIR WILLIAM GAIRDNER.

A DINNER under the auspices of the Glasgow University Club, London, at which Sir William Gairdner, K.C.B., M.D., was the special guest, was held in the Trocadero Restaurant, London, on the evening of 30th June, 1899. The chair was occupied by Lord Kelvin, F.R.S., president of the club, and among those who supported him were—Lord Shand, Mr. James A. Campbell, M.P., Sir W. Broadbent, Mr. James Gairdner, Alderman Sir James Ritchie, Dr. Heron, Mr. Jonathan Hutchinson, Professor Ferguson, Sir Joseph Fayrer, Mr. Pridgin Teale, Dr. MacLagan, Mr. Temple Gairdner, Dr. W. R. Lang, Hon. C. Rothschild, Professor W. Ramsay, Mr. G. F. Deacon, Mr. A. S. Stevenson, Mr. Rankine Wilson, Mr. Wallace Lindsay, Mr. James Graham, Sir Colin Scott Moncrieff, Mr. Rutherford Clark, Professor Paton Ker, Dr. James Taylor, Professor M'Cormack, Mr. J. Struthers, Dr. Seton Orr, Dr. Guthrie Rankin, Dr. Hawthorne, Dr. Abercrombie, Mr. Walter C. Watson, Dr. St. Clair Thomson, Mr. Norman, Mr. MacLehose, and Mr. James M. Dodds, hon. secretary. Apologies for absence were intimated from, among others, Lord Lister, Lord Balfour of Burleigh, Mr. James Bryce, M.P., Mr. Justice Stirling, Mr. Scott Dickson, Solicitor-General for Scotland, Very Rev. Principal Story, and Sir William White.

After dinner, the CHAIRMAN gave the toast, "The Queen," which was loyally honoured.

The toast, "The Health of Sir William Gairdner," was then submitted. The CHAIRMAN, in doing honour to the guest of the evening, said he felt a very strong sense of sympathy and brotherhood with Sir William Gairdner. Sir William and he graduated in the same year, that of 1845, and they had been lifelong friends ever since that time. After fifteen years of medical practice in the hospitals and in private practice in Edinburgh, and in teaching in one of the important and valuable Edinburgh medical schools, Sir William became a professor of medicine in the University of Glasgow. His advent to Glasgow was a precursor of very grand and valuable results, not only for Glasgow, but for the whole of the United Kingdom. Certainly his advent and his action in the early days of his professorship were to a very large extent the cause of the very important events which followed so rapidly. The health of Glasgow had not been celebrated for its excellence before that time. The death-rate was nearer 30 than 20—he was afraid if the matter was examined into it would be found to be not less than 30—while now he supposed it was about 20, and he thought they might look upon the Town Council and the medical officers in Glasgow generally as having by their work, by their zeal for the public good, and by their perseverance in carrying out good works, been responsible for the material improvement in the health of the city. Sir William in the first or the second year of his professorship was appointed to be medical officer of the city of Glasgow. There had been medical men in the employment of the Town Council under various Police Acts, and no doubt they did good in their time, but the first official medical officer in the city of Glasgow—indeed, the first official medical officer in any city in Scotland—was Sir William Gairdner. Their guest, whose heart had been in his professorial work from the beginning, immediately entered with zeal into the duties of his office, and enriched his teaching with the results of his observations. It was certainly a great advantage, indeed, to a university to be in a great town and to act in harmony with the Town Council and other institutions of the town, and it was interesting to note that Sir William's earliest lectures, instead of being injured by part of his time and attention being given to the city work, were actually improved, and his teaching was enriched by the experience which he got by seeing the evils and in studying the modes of remedying them. A very important Act—the City Improvement Act—was passed in Glasgow four years after Sir William entered his professorship. Their guest was one of the originators and great promoters of that Act. He also went abroad, and with a committee of the Town Council visited Paris, Brussels, and Amsterdam, examined into the improvements then being carried out in the Second Empire, and into the condition of affairs in Brussels and Amsterdam. After returning to Glasgow he drew up for the Town Council a report which had helped to guide that body very much indeed in the valuable work it had done, resulting, as they all believed, in the greatly improved condition of health and in the great improvement in Glasgow as a place for happy homes, not only for the wealthy but for the very poorest and humblest of its citizens. But Sir William Gairdner's good work had not been confined to the city of Glasgow. He early helped the General Medical Council in the great investigation which was instituted into the system of medical teaching and medical examinations in different parts of the United Kingdom, and as a member of the Council he had done good service for the public. During all his public work, however, Sir William's heart was always in the university. All he learned was brought home and given to his students. "Gentlemen of the University Club," concluded his Lordship, "I ask you to drink in the most cordial manner to the health of our guest."

The toast was enthusiastically received, the company singing "He's a jolly good fellow."

Sir William Gairdner, who was loudly cheered on rising to respond, thanked the company for what he described as a most unexpected honour. Lord Kelvin said that in everything he (Sir William Gairdner) had done, his heart was always in the university. There his noble friend was right. In looking back on a now not short career, and upon the whole of the impulses that had guided him throughout, he could not help feeling that his career, whether for good or for evil, had been a remarkably straight career all through. That was to say that the primitive ideas that guided him as a young man had guided him throughout. He was bound to be, if nothing else, a physician and a teacher of medicine, and from almost the first moment after graduation he remembered that was distinctly the current of his ideas. He could not compare with the chairman in having been a professor at 22, because he was 38 before he achieved that honour, but he was a teacher long before that. The appointment thoroughly fell in with his desires, and his choice had never caused him a single moment of regret or discontent. He was almost inclined to say that he felt no abatement in his zeal for teaching now, for it was just as much an enjoyment as ever to go down to the hospital and do clinical work. He proceeded to remind the members of the club that by advancing the interests of the club they would do a great deal to increase the effectiveness of Glasgow as a moral and educational force in the world at large. The University of Glasgow had been most liberally supported. No one could deny that the support given by the citizens of Glasgow during the last forty years had been very remarkable, but with all, the university was very far behind what it ought to be. He had always held by the necessity for practical as well as systematic teaching. Something was now being done in this direction. Those interested were all working with a good understanding, and he hoped that when the appeal was made to the public for additional resources, medicine would not be allowed to fall into the cold shade.

PROFESSOR W. RAMSAY proposed "The Houses of Parliament."

LORD SHAND, in replying for the House of Lords, denounced the cry for the "ending or mending" of the Chamber, and claimed for it the same patriotism, and the same devotion to the Queen, as was to be found in the House of Commons.

MR. J. A. CAMPBELL, M.P., responded on behalf of the House of Commons. He also added his testimony, as a native of Glasgow, to the high esteem in which Sir William Gairdner was held, not only as a professional man and in connection with the University, but in the city of Glasgow. He did not know anyone who had done more to link together the interests of the University with the interests of the town.

Other toasts were "The Visitors," proposed by MR. JONATHAN HUTCHINSON, and acknowledged by SIR JOSEPH FAYRER and SIR WILLIAM BROADBENT; and "The Chairman," proposed by DR. HERON.

Before the dinner the annual general meeting of the club was held, when a very satisfactory report and balance-sheet were adopted. Lord Kelvin was elected president, and Sir William Gairdner, vice-president; Dr. Guthrie Rankin, treasurer; and Mr. Norman M. MacLehose and Mr. James M. Dodds, honorary secretaries.

UNIVERSITY OF GLASGOW: GRADUATION CEREMONY.—The summer graduation ceremony at Glasgow University took place on 20th July last in the Bute Hall, Gilmorehill. It is usually confined to graduands in the Faculty of Medicine, but on this occasion a number of honorary degrees were conferred, and more than ordinary interest attached to the function. Occurring as the ceremony does in the vacation, the undergraduate was prominent by reason of his absence, and as a consequence the proceedings were carried through with a measure of decorum and dignity such as in other circumstances is not always attained. Shortly before noon renewed interest was awakened by the appearance of the four gentlemen upon whom the Senate had resolved to bestow the honorary degree of Doctor of Laws. They entered from the grand staircase, accompanied by Professor Glaister, who conducted them along the main corridor to their places on the platform. They formed a distinguished group. First came Professor Angellier, of Lille, a singularly striking figure, in the pale orange-coloured robe of his university. He was followed by Sir Henry Irving, wearing his academic robe over a morning costume. Similarly attired was Mr. Robert Jack, the Government Geologist of Queensland, who came next. The last of the quartet was Colonel Hector Macdonald, the hero of Omdurman. Over his brilliant military uniform, his breast covered with medals and decorations, he also wore an academic robe. As they passed down the hall they were warmly cheered by the audience. Members of the Senate entered the hall at noon, walking to the platform in processional order. The Very Rev. Principal Story, who presided, had with him on the rostrum Professor Stewart, clerk of Senate, and Professor Glaister, while among others present were Professors Sir William T. Gairdner, Buchanan, Young, Jack, Cooper, Lodge, Hastie, Macewen, M'Call Anderson, Bower, Barry, and Becker, Sheriff Berry, Mr. William Jacks, LL.D., ex-Bailie Bilsland, Dr. D. C. M'Vail, Mr. Archibald Craig, and Mr. Alan Clapperton. The proceedings were opened with prayer in Latin by the Principal, who afterwards performed the ceremony of "capping," the recipients of the honorary degree of Doctor of Laws being introduced by Professor Glaister. The following is a list of the gentlemen on whom the degree of Doctor of Medicine (M.D.) was conferred:—

I. *With Honours.*—Charles Oliver Hawthorne, M.B., C.M., England (Thesis—"Studies in Clinical Medicine").

II. *With Commendation.*—David Blair, M.A., M.B., C.M., Scotland (Thesis—"Acromegaly with Insanity"); John Gordon, M.B., C.M., Scotland (Thesis—"Tuberculin as a Remedy for Lupus, and its position as a Therapeutic Agent in the Treatment of Phthisis Pulmonalis"); Hugh Kerr, M.A., M.B., C.M., Scotland (Thesis—"Recurrent Insanity"); Robert Scott, M.B., C.M., Australia (Thesis—"A Review of Hydatid Disease in Australasia during the Decennial Period, 1888-97").

III. *Ordinary Degree.*—Richard William Jones, M.B., C.M., Wales (Thesis—"The Sanitary Condition of a District in Glamorganshire, with special reference to an Epidemic of Enteric Fever therein"); Archibald Mason, M.B., C.M., Scotland (Thesis—"Pyrexial Conditions of Childbed"); George Bain Murdoch, M.B., C.M., Scotland (Thesis—"A Case of Multiple Neuritis and its Treatment"); Anthony M'Call, M.B., C.M., Scotland (Thesis—"Some Observations on the Microscopic Examination of the Blood, with special reference to the clinical significance of the Leucocytes"); Norman Macnair, B.Sc., M.B., C.M., Scotland (Thesis—"Some Types of Disseminated Sclerosis"); William Park, M.B., C.M., Scotland (Thesis—"Chronic Lead Poisoning, with special reference to Symptoms and Pathology"); Alexander Roxburgh, M.B., C.M., Scotland (Thesis—"Sarcoma Ovarii").

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the Scottish Conjoint Medical Board, held in Glasgow, the following candidates passed the respective examinations:—

First Examination (Five Years' Course).—Katherine Mary Chapman, Shropshire (with distinction); Archibald Monteath Laurie, Glasgow (with distinction); James Robert Robertson, Glasgow; Alexander Glen, Kilsyth (with distinction); William Adams, Kilcreen; Robert Calder Blyth, Glasgow; James Reginald Purcell, Navan, Co. Meath; William Douglas Cockburn, Catrine; Alexander Allan, Torrance; Patrick Mitchell Coiman O'Doherty, Armagh; Alexander Russell Young, Stenhousemuir (with distinction); Rudolf Baranov, South Africa; Denis Christopher Cullaghan, Cork; John Webster, Paisley; John Hutchison Fyfe, Glasgow.

First Examination (Four Years' Course).—William Barclay, Kilbirnie; John Willett, Burland; John Arthur Aickin, Belfast; John Joseph O'Sullivan, Cork; James Marshall Campbell, Grange, Banff; John Dunlop, Beith; Samuel Graham Kinloch, Manchester; Thomas Dow, Crossford; Herbert Davis Pitt, Willenhall.

Second Examination (Five Years' Course).—Harry Anderson Lunn, Jedburgh (with distinction); Robert John Roberts, Bala, N. Wales; Thomas Ernest Harty, Cork; David Roberts Williams, Borth, Portmadoc; Michael Bernard Conroy, Co. Galway; Hugh Williams, Carnarvonshire; David Moodie, Galashiels; Herbert M'Master, Donaghadee; William Dalziel Sutherland, South Shields; John Henry O'Sullivan, Galway; James Ninian M'Morris, Newfoundland; Aloysius Francis Fleming, Youghal.

Second Examination (Four Years' Course).—Henry Johnston Fryer, Belfast; John Gemmell Welsh, Glasgow; John Anthony Freeman Hatch, Plymouth; John Kerr Bell, Lisburn; James Graham, Dublin; Joseph Caton Shelmerdine, Avranches, France; John Willett, Cheshire; Richard M'Kim Wilkin, Sligo; Robert Galloway Whitelaw, Kirkintilloch; James James, Monmouthshire; Arthur Bryans, Sunderland; Matthew O'Halloran, Tulla, Co. Clare.

Third Examination.—David Scott Erskine Macnab, Calderhead (with distinction); George Russell Jarvie, Cambuslang; John Tudor Griffiths, Flintshire (with distinction); Robert Wardlaw, Linlithgowshire; Donald Duff, Glasgow (with distinction); John Allan, Glasgow; Adam Fox, Chapel-en-le-Frith; George Johnstone Campbell, Greenock; William Thomson, Glasgow; William Burns, Belfast; Charlotte M'Crea, Glasgow; James Joseph Lynch, Co. Cork; Joseph Bernard O'Mahony, Midleton, Co. Cork; John Joseph M'Nicholl, Co. Derry; William James Healy, New South Wales; Frederic

Wm. M'Cay, Co. Antrim; Stuart Jackson Farries, Nottingham; William Mason, Derbyshire; John Skyes, Southport; Thomas Randolph Hunter, Sheffield; John Bygott, Cheshire; Winifred Nell, Ceylon; Walter Hibbert, Bradford; Mary Eleanor Rocke, North Wales; Katherine Elizabeth Gregg, Gloucestershire; George Goldfoot, Liverpool; Archibald Craig Balfour, Edinburgh.

Final Examination (and Admitted Licentiates of the Three Co-operating Authorities).—John Scott, Ballycastle, Co. Antrim; Henry Richard Macnee, Edinburgh; John Thomas Farren, Glasgow; Nelson Johnstone, St. Luke's, Cork; George Brownlie M'Kendrick, Wishaw; Daniel Francis Mangan, Edinburgh; George Augustus Thompson, Darwen; James Dunlop, Glasgow; Alexander Laurie Brown, Pollokshields; Kenneth Rodas Devaignes Shaw, London; John Herbert Lawson, Girvan; Hamilton Joseph Bell, Dublin; Evelyn Stone Milestone, London; Henry Dodd, Birsay, Orkney; Robert Stewart, Glasgow; Walter Hibbert, Ilkley, Yorkshire; William Frederick Cockayne Bennett, Upperthorpe, Sheffield; John Thomas Bradley, Belfast; Syed Hamid Ali, Edinburgh; Wasudeo Ramchandra Bhat, Edinburgh; John Willett, Tarperley, Cheshire; John Joseph Porter, Belfast; Charles Scott Wilkinson, Edinburgh; George Maskell Freke, Edinburgh; Arno B. S. C. Morrogh, Madras; Edwin Joseph Ling, Glasgow.

ROYAL INFIRMARY APPOINTMENT.—Dr. J. B. M'Kenzie Anderson, Extra Dispensary Physician, has been promoted to the full Dispensary appointment in succession to Dr. T. K. Monro, promoted to the wards.

VICTORIA INFIRMARY APPOINTMENTS.—Drs. John Crow and John Macdonald, in-door house surgeons, have been appointed in-door house physicians. Drs. Johnstone and Binnie Dunlop, non-resident assistant surgeons, have been promoted to be in-door house surgeons. Drs. Gardner and J. T. Strang have been appointed non-resident assistant surgeons. Each appointment is for a term of six months.

VICTORIA INFIRMARY: BELLAHOUSTON DISPENSARY.—The New Dispensary at 40 Morrison Street, South Side, was formally opened on the afternoon of 28th June by Sir James King. Mr. John Laing, Chairman of the House Committee of the Infirmary, presided at the ceremony. The Dispensary has been erected as a memorial of the late Misses Steven, of Bellahouston, and has cost £6,000, the money being provided by the Bellahouston Trustees.

BACTERIOLOGIST TO THE CORPORATION.—Although the advertisement inviting applications for this office was published in Germany, all the candidates—sixteen in number—are from the United Kingdom. It is not expected that the appointment will be made until the middle of this month.

CHAIR OF PATHOLOGY IN ST. ANDREWS UNIVERSITY.—The University Court of St. Andrews University, at a meeting held on Saturday, 29th June, appointed Dr. L. R. Sutherland to the Chair of Pathology, vacated by Professor Muir on his appointment to the corresponding Chair in Glasgow University. Dr. Sutherland has for several years been senior assistant in the Pathological Department of Glasgow University, and has been engaged for some time in editing the new (fourth) edition of the late Professor Coats's well known *Manual of Pathology.*

THE WILLIAM F. JENKS MEMORIAL PRIZE.—The fifth triennial prize of five hundred dollars will be awarded to the author of the best essay on "The Various Manifestations of Lithæmia in Infancy and Childhood, with the Etiology and Treatment." The trustees have the right to publish the successful essay. The prize is open for competition to the whole world, but the essay must be the production of a single person. The essay must be written in English, or, if in a foreign language, accompanied by an English translation. It must be sent to the College of Physicians of Philadelphia, Pennsylvania, U.S.A., before 1st January, 1901, addressed to Richard C. Norris, M.D., Chairman of the William F. Jenks Prize Committee. Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed by their respective writers or their agents within one year.

NEW PREPARATION.—*Aspirin* (The Bayer Co., Ltd.) has been introduced as a substitute for salicylic acid. It is a compound of that body, and is supplied in the form of a white crystalline powder, which melts at 135°, and dissolves sparingly in water but readily in alcohol. When given internally, it passes through the stomach unchanged to be decomposed by the alkaline intestinal juices. Accordingly, the new drug does not affect the stomach or impair the appetite. It is hoped also that owing to its slow decomposition it will not give rise to tinnitus so readily as the ordinary salicylates do. The drug has a faint odour of acetic acid. The slight taste it possesses is agreeably acid, and is thus an improvement on that of the salicylates. The manufacturers recommend the following as a convenient formula:—Aspirin, 15 grains; sugar, 50 to 60 grains; water, half an ounce.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1898-99.

MEETING XI.—17TH MARCH, 1899.

The President, DR. G. S. MIDDLETON, *in the Chair.*

I.—SOME OBSERVATIONS ON THE TUBERCULIN TREATMENT.

BY DR. T. M'CALL ANDERSON.

Dr. M'Call Anderson's paper will be found as an original article in our issue for May, 1899, at p. 321.

II.—CASE OF GASTRORRHAPHY FOR DILATED STOMACH.

BY MR. A. E. MAYLARD.

J. C., æt. 55 years, a stableman, was admitted into the Victoria Infirmary on 6th September, 1898, under the care of Dr. Ebenezer Duncan. He stated that his illness commenced about two years before, by more or less pain in his back. At the time he thought he was suffering from lumbago, but the pain soon shifted to the epigastrium, where it has remained continually ever since. He describes it as of a burning, gnawing character, located just below the ensiform cartilage. Its presence is very constant here, though sometimes passing through to the back. It is somewhat aggravated by hunger, and frequently relieved by the ingestion of food. He never vomited, but suffered considerably from flatulency. The bowels have always been costive, and required aperients. To his knowledge he has never passed blood.

An examination of the abdomen revealed some pain on pressure over the affected area, and the stomach appeared to be considerably dilated, extending an inch below the umbilicus and laterally as far as the left axillary line. The heart manifested a marked mitral murmur. The other organs appeared healthy. His weight is 9 st. 4 lb. While in the medical ward treatment of the usual kind was adopted, embracing lavage; and as no improvement followed, he was transferred to the surgical ward.

On 9th November, 1898, the patient was admitted into Ward III, under the care of Mr. Maylard, with the object of having an exploratory operation performed upon the stomach.

Operation.—The abdomen was opened above the umbilicus, and a digital examination then made by sweeping the fingers over the surfaces of the stomach and around the pyloric region, but nothing of the nature of adhesions or other complications was detected. The stomach was then partially withdrawn through the parietal wound and its anterior wall incised for about an inch in the long axis of the organ, and about midway between its two curvatures. The pyloric orifice and the interior of the stomach were examined with the index finger, but here also the result was negative. No constriction or thickening was felt at the pylorus, the apex of the finger being easily admitted into the opening. The internal lining of the organ, as far as it could be investigated, also appeared normal; no thickening or ulceration. The exploratory incision was then closed by a continuous Lembert suture, and steps taken to lessen the size of the dilated stomach. After withdrawing the organ to as great an extent as possible, a longitudinal fold in the anterior wall was folded in, and the two curvatures approximated and secured by a series of interrupted Lembert's sutures. The stomach was then returned, and the abdominal parietal wound closed by three separate rows of stitches—a peritoneal, aponeurotic, and skin. The operation lasted fifty-five minutes.

He continued to vomit after the operation small quantities of blood-stained mucus, and complained of some pain in the epigastrium. About 1 A.M. the next morning he vomited about 8 oz. of pure blood. From that time onwards till 10 A.M. it was computed that he brought up about 35 oz. of blood. His condition when seen by Mr. Maylard at 10 A.M. was to indicate free hæmorrhage into the stomach from the gastric wound, and the necessity of the immediate removal of the patient to the theatre. An anæsthetic was administered, and the exploratory incision in the stomach at once exposed by the removal of all stitches. It was then found that some small veins were bleeding at the margin of the incision. These were secured, the edges of the mucous membrane stitched together, and a continuous Lembert applied to the peritoneal coat. The gastric plication was resutured, and the abdominal wound reclosed.

The median-cephalic vein was opened, and three pints of hot saline solution injected. The pulse and respiration at once commenced to improve. Before leaving the theatre the patient's stomach was thoroughly washed out until the returning fluid was no longer blood-stained. From this period onward the conditions were those of continued improvement until he left the hospital on 18th January for the convalescent home. He reported himself on 10th February, having put on flesh, taking his food well, and complaining only of occasional "stitchy" sensations about the region of the wound. He felt none of his old pain and discomfort. His weight on 15th March was 11 st. 4 lb., a gain of 2 st. since admission.

(Report of the case as taken by Dr. Charles Fleming and Dr. James M'Haffie.)

III.—CASE OF MODIFIED CRETINISM.

By Dr. Robert Kirk.

Dr. Kirk, Partick, showed a case of modified cretinism in a boy 20 years and 6 months old, whose height was 4 ft. ½ in., and weight 5 st. 1 lb. He stated that the lad's father and mother were both dead, and that the latter had probably been the subject of myxœdema, as she was for some years believed to be dropsical, her daughter-in-law informing him that her eyelids were like bags of water, especially in the morning, while a daughter remarked that she had a skin like wax and cheeks like roses. She dropped down dead suddenly when going about the house on her usual duties, an interesting fact in view of the liability to death from syncope in the case of those undergoing thyroid treatment. He founded the diagnosis of cretinism in the present case on the dwarfed stature, the broad squat build, slow compressible pulse, occasional subnormal temperature, &c., and regarded it as an instance of what French writers called *La forme fruste du myxœdème atrophique.*

Perhaps the most interesting aspect of the case lay in certain negative features which it presented; the lad was bright and intelligent, although a good deal below average capacity, and there was not the slightest drawl or slowness in his speech, which, on the contrary, was rapid and fluent.

On these and other grounds Dr. Duncan, Dr. Hinshelwood, and others expressed doubts as to the case being one of cretinism at all; but Dr. Kirk remained confident in his opinion, and hoped that he would have the opportunity of showing the result of thyroid treatment on some future occasion, and this will be looked forward to with some interest.

IV.—CASE OF SYNCHYSIS SCINTILLANS ASSOCIATED WITH SYPHILITIC DISEASE OF THE EYES.

By Dr. James Hinshelwood.

The patient, 51 years of age, is a married woman who has had four children, and four years ago a miscarriage. Ever since her miscarriage, she has been greatly troubled with severe headaches and pains in the limbs. These headaches and pains have always been much worse at night, and particularly for the last year, during which she has rarely had a good night's rest.

On 11th February she came under my observation at the Eye Infirmary, complaining of increasing failure of vision in the right eye during the last three weeks. On ophthalmoscopic examination the fundus could only be seen very dimly, owing to a dust-like opacity of the vitreous; but hyperæmia of the disc could be made out, and a diffuse opaqueness of the retina, especially in the neighbourhood of the disc. The appearances were those of a syphilitic chorio-retinitis. On movement of the eye upwards and downwards a shower of shining particles were seen to diffuse themselves through the vitreous, falling to the bottom when the eye became stationary. The vision in the left eye had been defective for several years. This defect was found to be due to a deposit of exudation and iritic pigment on the central lesion of the surface of the lens, due to a former attack of iritis.

The patient was put at once upon energetic specific treatment, with the rapid disappearance of her headaches and limb pains, from which she is now completely free. Her vision in the right eye has greatly improved, the dust-like opacity of the vitreous has disappeared, and you can now see the fundus with normal distinctness. The brilliant shining particles can now be seen more plainly floating on the vitreous with every movement of the eye, like a veritable shower of gold. These brilliant particles are known to consist chiefly of cholesterine crystals, and sometimes also of groups of tyrosine needles. As at the same time the vitreous is fluid, this condition has been called synchysis scintillans from the glittering caused by the reflection of light from the surfaces of the crystals. These crystals are generally supposed to be the result of fatty and other degenerative changes, which take place in the elements of the vitreous as a result of senile degeneration.

In the third volume of Norris and Oliver's recent *System of Diseases of the Eye*, page 382, we find the statement that "sparkling synchysis is found only as a senile change, never before the age of 60, and usually over the age of 70." The case under consideration destroys the validity of this statement. Our patient is nine years short of 60, and is a well-preserved woman, without a grey hair, and showing no signs of senile degeneration. There is, however, sufficient cause in the syphilitic chorio-retinitis for a profound alteration in the nutrition of the vitreous, and hence for the degenerative changes resulting in the synchysis scintillans.

This case is therefore of special interest as showing the presence of this condition at a comparatively early age, apart from signs of senile degeneration, and also from its association with syphilitic disease of the eye, which would interfere with the normal nutrition of the vitreous, and therefore affords a probable explanation of the condition seen in this case.

REVIEWS.

Chemical and Microscopical Aids to Clinical Diagnosis. By CARSTAIRS C. DOUGLAS, M.D., B.Sc. Glasgow: James Maclehose & Sons. 1899.

"THIS little book is intended to give, within a reasonably small compass, a practical description of those chemical and microscopical methods which are now so much employed as necessary adjuncts to clinical diagnosis."

These words, taken from the preface, fairly describe the aims and objects of this work, and we have to congratulate Dr. Douglas on the manner in which he has carried them out.

The book is divided into seven different sections, dealing with the following seven subjects, viz.:—The urine, gastric fluids, saliva and sputum, the blood, the fæces, pathological fluids, the skin and hair. Under these various headings certain methods of examination are described, the author choosing the methods he himself has found most useful. The urine, of course, occupies a large amount of space, indeed, more than half the book, and we think the best part of the book. The section on the analysis of gastric fluids is also good, the author evidently being familiar with the methods he describes. But in the section on the blood he does not seem on such certain ground. For example, he tells us (p. 206) that the nuclei of the polynuclear leucocytes stain with acid dyes, and their plasma granules with neutral stains; and, again (p. 212), that the plasma granules of the myelocytes are likewise neutrophile—statements, which as far as we know, are now considered quite incorrect. We fear, too, that the student, guided only by the description given in the text, will have some difficulty in distinguishing the different kinds of leucocytes. For instance, how is he to distinguish "(2) Large lymphocytes and transitional forms, 13 μ in diameter. These also stain with basic dyes," from "(5) Basophile 'mast-cells,' with granules that take up basic stains?" The relationship of the myelocytes to either of the above classes is also very vague. But these defects must not be too much dwelt on, for in a book of this size it is difficult to be explicit where much detail is required.

The book is well printed and fairly well illustrated, and it will, we think, quite justify its publication.

Extra-Uterine Pregnancy: A Clinical and Operative Study. By JOHN W. TAYLOR, F.R.C.S. Eng. With 65 Illustrations and Diagrams, mostly original. London: H. K. Lewis. 1899.

IN this volume Mr. Taylor issues his Ingleby Lectures in a new form, bringing the record of his experience of extra-uterine pregnancy up to the latest date. It is a record which is both interesting and valuable, and while by no means above question in many points, marks well the great advance made of late years in the consideration of this important subject.

When we consider that it was only in 1883 that Tait did the first operation for ruptured tubal pregnancy, and when we note the frequency with which such operation is now recognised as necessary for the saving of life and the relief of suffering, we feel amazed at the thought that up to so recent a period this disease was neither recognised nor treated. The new men in the profession have, in their instruction with regard to this one subject, a great superiority over those who graduated even a few years ago, and should give a much better account of themselves in their management of diseases of women.

Mr. Taylor's work is specially valuable in his differentiation of the kinds of ectopic pregnancy. He gives up, once for all, the old and antiquated division into ovarian, tubal, abdominal, &c., and starting with the postulate that all extra-uterine pregnancies are primarily tubal, he demonstrates very clearly, and chiefly from actual observation, the manner in which the various secondary forms arise.

These forms are (1) tubo-abdominal; (2) tubo-ligamentary; (3) tubo-ligamentary-abdominal; (4) tubo-uterine (interstitial). To these he adds as forms of partially ectopic pregnancy—(5) utero-abdominal, in which in a uterine pregnancy the uterus has ruptured and the fœtus is found in the abdomen; and (6) utero-ligamentary, a hypothetical form in which the fœtus would pass from the uterus into the broad ligament.

His discussion of the tubo-abdominal form is specially interesting from his demonstration of the existence of the amnion in these cases, the former supposition being that the fœtus existed uncovered in the peritoneal cavity; and also from his establishing the fact that this form arises without passing, as Tait supposed, through the ligamentary stage. When it does so, it constitutes what Taylor calls the tubo-ligamentary-abdominal form.

We would also call attention to his discussion of the tubo-ligamentary form, and his distinction between the anterior (the usually recognised subperitoneo-pelvic) variety and the posterior or retro-peritoneal variety, which he considers the more frequent.

Like all recent authorities, Mr. Taylor is of opinion that "the treatment of extra-uterine pregnancy is essentially operative," and it appears that in his later work he has returned to the old posterior vaginal incision. Most of his operations, however, have been cœliotomies, and we cannot but think that he will ultimately return to abdominal section as the proper operation. There is no other method that can give the same control over the pregnancy and the hæmorrhage resulting from its rupture. The cleaning out of the hæmatocele and washing out of blood-clot leaves the source of the trouble untouched, and the cases in which no later accident occurs are, perhaps, simply the cases where absorption of the hæmatocele would have gone on without accident had no operation whatever been done.

Probably, however, we are yet far from hearing the final word regarding the management of these cases, as we are certainly far from deciding as to their causation. On this subject Mr. Taylor comes to the commonsense conclusion that the cause of the extra-uterine pregnancy is some delay in the transit of the ovum from ovary to uterus, and this delay may be produced by many causes.

The book is well printed and has few typographical errors, but the illustrations leave much to be desired. Mr. Taylor is more a surgeon than an artist, and might well imitate some recent surgeons in getting an artist, or even a camera, to represent his ideas and specimens.

The Practice of Obstetrics by American Authors. Edited by CHARLES JEWETT, M.D. London: Henry Kimpton. 1899.

ONE really gets bewildered at the numerous works on obstetrics and diseases of women by our American cousins. There seems to be no end to them; they follow each other in rapid succession. It would be difficult to say which of the most recent additions to our medical literature on this special subject occupies the foremost place. They are all of a high-class order, and we have no hesitation whatever in according the same praise to the one now under review.

There are no fewer than nineteen contributors to this handsome volume, and we may say that each has done his part well. The book is divided into eight parts, containing in all thirty-four chapters; each chapter being contributed by one specially competent to deal with that particular subject. In two or three instances, there are two contributors to special topics.

A glance at the names of the gentlemen and their professional status is a sufficient guarantee of the treatment of the subjects entrusted to each.

Naturally in a book of this kind, Part I is devoted to an account of the anatomy of the female pelvic organs as well as the mammary glands. This is full and trustworthy, and its value is enhanced by several fine engravings, both plain and in colour, as well as several beautifully coloured plates, which are really works of art. Quite a number of the engravings are original.

The physiology of pregnancy is treated of in Part II, as regards menstruation, &c., a very good chapter being taken up with the diagnosis of pregnancy. Some useful words are also said concerning the hygiene and management of the pregnant state.

A full and satisfactory account of the physiology of labour is given in the next part, several chapters being added on the management of normal labour. This part is quite up to date in its insistence on the part of the student or physician of the strictest antiseptic precautions.

The physiology of the puerperium is very succinctly treated of in the following part, a chapter being devoted to the management of the new-born child. This is excellently done, and indicates a great advance on books published in our student days. The treatment of abortion is full and up to date, and we are pleased to find that stress is laid on the early and complete removal of the whole of the retained products. The writer of the article on ectopic gestation has contributed a very full and accurate account of this serious complication of the pregnant condition, and we may say at once that his treatment at the various stages is quite up to the latest. This condition, we are glad to know, has been receiving the very careful attention which its seriousness demands, and more cases are operated on early with a correspondingly higher percentage of recoveries. This is due, no doubt, partly to greater accuracy in early diagnosis.

A very full account of the various anomalies of the maternal passages and of the fœtus follows.

We are glad to find that eclampsia is so fully treated in the succeeding chapter, and that the writer recommends veratrum viride so highly—next, in fact, to chloroform. With us it has not yet received that attention which it deserves, but we believe it is now being more frequently used in this serious complication, and with good prospects of success. Bimanual dilatation of the parturient os is highly spoken of in order to expedite delivery, a proceeding which the writer believes has not been much used in this country, but which seems worthy of a trial. It is satisfactory to note that the writer lays some stress on the use of normal saline solution by prolonged rectal irrigation; but we think he under-estimates the value of the same agent used either by intravenous or intercellular means.

Eighty pages are devoted to the pathology of the puerperium, and will well repay careful perusal.

Obstetric surgery is very fully treated in the remaining chapters of Part VIII, embracing, *inter alia*, considerations of the use of the forceps, version, &c.

These are quite up to date. While treating of Cæsarean section, no mention is made of the excellent results achieved by Cameron. In discussing the relative merits as between Cæsarean section and symphysiotomy in simple flat pelves, and generally contracted pelves, where forceps and version are out of the question, the writer states that "the maternal mortality from Cæsarean section is much greater than that from symphysiotomy. The table of cases operated upon in this country by various surgeons showed maternal mortality of almost 33 per cent, &c." This seems higher than that obtained by Cameron, whose maternal mortality, so far as one's memory goes, is not much over 10 per cent.

In a book by so many contributors, it is not often that one finds all the articles of such order of merit. We have had great pleasure in reading it; it is excellently got up in every way. Dr. Jewett has done his work well, and with his collaborateurs has produced a work on obstetrics which we can with every confidence recommend to the student and practitioner as a reliable guide to them in their difficulties.

An American Text-Book of Gynæcology for Practitioners and Students. Edited by J. M. Baldy, M.D. Second Edition, revised. London: The Rebman Publishing Co. 1898.

Though this is a work of collaboration, it differs from other books of this class in that the editor has added to and subtracted from the text with the object of rendering it as uniform as possible. The names of the contributors—Howard A. Kelly, William Goodell, J. M. Baldy, Henry T. Byford, &c. —form a guarantee of good work, which a careful perusal of the volume helps but to confirm. As a practical text-book on gynæcology for students and general practitioners we can recommend it highly.

Diagnosis and treatment are considered fully and in an easily intelligible fashion, and the various difficulties are elucidated, wherever possible, by numerous well-executed illustrations, many of which are coloured. Considering, however, the large share which the microscope takes in diagnosis nowadays, morbid anatomy has received rather scant attention.

In the present revised edition extensive alterations have been introduced, which help to bring the book well up to date.

The portions devoted to the various plastic operations, and to abdominal and vaginal hysterectomy, and the chapter on diseases and injuries of the urinary tract, deserve special mention in this respect. The addition, also, of a short, but valuable, article on "After-treatment in Gynæcological Operations" forms a feature worthy of imitation by other text-books. We note with surprise, however, the omission of any reference to deciduoma malignum, the clinical features of which are now indubitable, though the histological characters are still subject of dispute.

Though pleased with the book as a whole, we think it right to draw attention to a few inaccuracies. On p. 549 the statement appears that "the arrangement of the folds of the (Fallopian) tube in the lower animals is much more complex than it is in the human female." That this is not merely a slip of the pen is evidenced by the reference given to three diagrams, one of which represents a cross section of a human tube with very few folds, and, therefore, manifestly obtained from a segment near the cornu of the uterus. Towards the outer extremity of the human tube the folds are exceedingly complex. On p. 427, again, vaginitis is said to be "generally the first step" in gonorrhœa. In view of the recent researches by Bumm and others, this statement certainly requires reconsideration. In conclusion, mention may be made of a few misprints which have escaped correction in this edition:—"Visceræ," p. 20; "ciliated vaginal" epithelium, p. 78; "mucus" discharges, p. 154; "chiefest," p. 312; "Trendelenberg," Pl. V, pp. 47, 407, 495, &c. In Pl. XXXVI the letter "c" refers to the right Fallopian tube (?), springing apparently from near the isthmus of the uterus.

Manual of Physiology. By LEONARD HILL, M.B. With 173 Illustrations. London: Edward Arnold. 1899.

OF the many smaller manuals of physiology that have appeared in recent years, this is distinctly one of the best. Written for the general reader as well as for the student, the use of technical terms and of complicated apparatus is avoided, and the attention is aroused by simple experiments or by reference to the experiences and facts of daily life. The student is taught to observe, to reason, to deduce the abstract from the concrete. From beginning to end the book is so interesting that one is irresistibly drawn on from chapter to chapter. Incidentally the author has many a side hit at the foibles of the age, the patent foods, medicines, hair-restorers; he take his illustrations from the burglar with his jemmy, the bicycle-pump, the cinematograph, the Röntgen rays. Not a page is dull.

After a few short chapters on the physical and chemical phenomena which underlie physiological conditions, and the application of these, living stuff is considered, the transformation of energy involved in vital activity, and the main points of the physiology of unicellular organisms. Thereafter, the structure of the human body, circulation, respiration, nutrition, innervation, and the senses are duly considered, and something original and novel is said of them all.

The selection of material is judicious, and the book will undoubtedly find favour with teachers in secondary schools, with candidates for examinations, and with medical students.

The work has been very carefully edited, and only one or two trifling mistakes have been noticed. On pages 6 and 118 normal saline is described as 6·5 per cent instead of ·65 per cent, although the direction for making the solution is correct; and on page 268 we find the remarkable statement (which could mislead no one) that "a substance has lately been isolated from yeast which, in the absence of all living yeast-cells, will turn alcohol into sugar."

With regard to the structure of the central nervous system, there is no reference to neuroglia or glia cells, although the description of the neuron is particularly good. The book can be heartily recommended to beginners as certain to rouse their interest in the subject, and to practitioners as a compact and readable book and for the many practical hints in its pages.

Elementary Physiology. By BENJAMIN MOORE, M.A. With 125 Illustrations. London: Longmans, Green & Co. 1899.

THIS book, the author tells us, is intended to give an idea of the structure of the body, and of the changes which are constantly taking place in it during life, to those who have no previous knowledge of the subject. This intention is ably carried out, but why is the title not Elementary Anatomy and Physiology? Roughly speaking, we should estimate that at least one-third of the book is pure anatomy; of the 125 illustrations, not more than half a dozen can be regarded as physiological; there is not a single diagram illustrative of physiological apparatus or methods. We have a pulse-tracing, a muscle curve, a diagram of the chief muscles which keep the body erect, a set of levers, a schematic diagram of the circulation, and all the rest anatomy, "most of the illustrations selected, by kind permission of Professor Schäfer, from the *Essentials of Histology* and from *Quain's Anatomy*."

Our objection to the large amount of anatomy is that, in the endeavour to keep the book within small limits, the physiology is too much condensed or crowded out. A few practical exercises are given in an appendix; but they should have been taken with the text—the exercise and the explanation of it—if the student is to be taught to examine and observe for himself. The subject matter is arranged in the usual way—a description of the skeleton, muscular system, viscera, and the circulatory system, being followed by chapters on the blood, nutrition, animal heat, excretion, the nervous system, and the senses.

In the chapter on Animal Heat, the production of heat is attributed entirely to chemical change (oxidation of the food). This is surely too limited a view; nothing is allowed for friction of the various organs upon one another, or of the blood circulating through the vascular system. On the whole, the exposition is sound and intelligible, although here and there we find phrases capable of misinterpretation. On page 246, for example, it is stated that "the nerve fibres which pass from a peripheral special sense organ are only capable of conveying to the consciousness one specific kind of sensation." So far as we are aware, nerve fibres do not convey *sensations* at all, but something called a nerve impulse which, passing to the nerve centres, arouses consciousness there. Again, on page 252—"quinine in powder is insoluble on the tongue, and has scarcely any taste;" on page 269—"In the eye the whole chamber, by virtue of its shape, acts as a converging lens in focussing objects on the retina," instead of the image of objects. The fenestra rotunda of the ear is repeatedly called the "fenestra rotundis," in sympathy, doubtless, with the fenestra ovalis; and we have the "viteous humour" and the "lacrymal gland," things which would have been better expressed otherwise. These, however, are only slight blemishes on a book which, well arranged and written, will doubtless, as the author hopes, "remove some of that deplorable ignorance which is so often met with, even among fairly well educated people, as to the general structure of their own bodies, and the actions which take place within them during life."

The Exploration of the Urethra and Bladder. By M. TUCHMANN, M.R.C.S. Eng., M.D. Würzburg. London: H. K. Lewis. 1899.

DR. TUCHMANN'S modest little treatise is noteworthy in two respects—in the first place, he has devised a method of closing either ureteral orifice by means of an ingenious catheter-clamp; and, in the second, he has made his experiments very largely on his own person. It must be confessed that ureteral catheterism in the male has hitherto been very unsatisfactory, and that much ingenuity has been thrown away in devising apparatus which was complex in use and unreliable in result. Dr. Tuchmann's "ureter-forceps" (as he calls the instrument) is like a small lithotrite, but is very light in construction and very easily handled, and the screw of the lithotrite is replaced by a small spiral spring which keeps the blades shut. The instrument is formed of two German-silver tubes, the one fitting inside the other, the one blade belonging to the inner and the other to the outer tube; from the existence of duly arranged openings in the tubes, the urine can be drawn off, so that the instrument can thus be used as a catheter. "After having introduced the instrument into the empty bladder," says the author, "we draw the two blades apart to their greatest distance (half an inch) and make them fast with the screw 'g.' We then turn the blades to the right side of the bladder so that they are quite transverse, and after that draw the instrument towards the vesical orifice of the urethra till the anterior blade is arrested by the circumference of the orifice. Now by rotating the handle we turn the points of the blades downwards, and the handle is then lifted up sufficiently to make the points of the two blades touch the floor of the bladder." The instrument is next pushed deeper into the cavity, and in its course the ureteric ridge comes to be placed between the two blades, and if at this moment the operator lets go the spring the ureteral opening is effectually clamped and closed. By then making use of the instrument as a catheter the urine from the kidney of the opposite side can be drained from the bladder, collected, and examined. As thus described the little operation looks complicated and uncertain, but the author anticipates such criticism by the following statement:—"It will be noticed that during all these manœuvres with the ureter-forceps I have not shown how to ascertain the exact position of the ureteric valve. To do this, and feel the valve before and during these manœuvres is, indeed, quite unnecessary; *the ureter-forceps is so constructed* *that the valve is seized by it without any searching at all.*" Should we find the manipulation as easy as the inventor predicates, we should still have some doubt as to the absolute innocuousness of the grip of an instrument whose pressure is sufficient effectually to prevent any escape of urine from the ureter.

The Anatomy of the Central Nervous System of Man and of Vertebrates in General. By PROF. LUDWIG EDINGER, M.D. Translated from the fifth German edition by WINFIELD S. HALL, Ph.D., M.D., assisted by PHILO LEON HOLLAND, M.D., and EDWARD P. CARLTON, B.S. Illustrated with 258 Engravings. Philadelphia, New York, Chicago: The F. A. Davis Company. 1899.

PROFESSOR EDINGER is so respected an investigator and teacher that neurologists are sure to welcome the appearance of an English translation of this monumental work on the central nervous organs. Translations of the earlier German editions seem to have met with hearty acceptance in America.

The value of this treatise can scarcely be over-estimated, and those who have already devoted much attention to the subject will derive most benefit from it. Though the translators have arranged it in chapters, it was originally in the form of lectures, and these are really designed for advanced students rather than for beginners. The work consists of three parts. The first of these comprises 44 pages, and is introductory in its aims. It reviews the history and the methods of investigation of the central nervous system, considers the fundamental conceptions of ganglion-cell and nerve, and discusses briefly the physiology of central organ and peripheral nerve. Those who have given special attention to the nervous system, and have taken some interest in the recent epoch-making revelations of its structure, will probably not be greatly impressed by these introductory chapters.

The second part, to which more than 130 pages are devoted, is a review of the embryology and comparative anatomy of the vertebrate brain. The author begins with the development of the brain and of ganglia, and then proceeds to describe in succession the structure of the spinal cord, the bulb with the nuclei of the cranial nerves, the cerebellum, the mid-brain, the inter-brain, and the fore-brain, including the olfactory apparatus, corpus striatum, and mantle. Professor Edinger shows a wide acquaintance with the comparative anatomy of the brain, a subject that we can well understand will actually fascinate certain minds, and which, moreover, has shown itself capable of yielding data of immense value, as, for instance, in the study of the olfactory apparatus. The olfactory nervous mechanism, it may be remarked, is discussed in this work with great thoroughness.

The third part of the work contains 230 pages, and is devoted to the special anatomy of the mammalian brain, with especial consideration of the human brain. The earlier chapters of this part are devoted to the fore-brain and mid-brain, with the olfactory apparatus and optic nerve. After this the pons and cerebellum are discussed, and then the peripheral nerve-roots, spinal ganglia, and spinal cord. The medulla oblongata and the tegmentum of the pons follow, and the last chapter is a review of the subject. We rather favour a different order in the teaching of this subject—that, namely, in which the cord comes before the bulb and pons, the fore-brain coming last; but, as already remarked, the present work is designed for advanced students, to whom the mere order is not so important. The translation includes an index of authors, of comparative neurology, and of the general contents of the work.

To give a useful summary of the contents of this volume within the limits of such a review as this is impossible. We are tempted, however, to quote a few sentences from various parts of the book:—"Here is an example of what the author stated above regarding the value or significance of single nerves. The apparently single facial nerve contains elements of the most manifold origin and significance" (p. 61). "There is in the animal kingdom no such thing as a brain which is throughout of a higher or lower degree of development" (pp. 84-85). "Where the inferior cerebellar peduncle enters the cerebellum is the least understood portion of the whole nervous system" (p. 108). "Phylogenetically the cerebellum is one of the oldest portions of the brain. Experiments upon the supra-œsophageal ganglion in arthropoda indicate that it fulfils functions equivalent or similar to those of the cerebellum in higher animals" (p. 102). "Except the ganglion habenulæ and optic system, no other portion of the brain is so constant in structure as the olfactory apparatus. Only the relative size varies; the structural features remain unchanged" (p. 146). "The oldest cortex represents essentially only a single sensory centre—the olfactory centre" (p. 174). "In birds, first in the series, the primary optical apparatus is connected with the cortical mechanism" (p. 175).

The writer describes the sensory pathway as extending from the nuclei of the posterior columns to the thalamus (tractus thalamo-bulbaris, superior fillet, thalamo-oblongatal part), and from the thalamus to the cortex (cortico-thalamic part). What was formerly known as the superior or cortical fillet, therefore, is now believed to consist of two segments, which must be in intimate contact with one another in the ventral thalamic nucleus (p. 272).

The terminology of comparative anatomy is so closely adhered to that we find no allusion to the name "fissure of Rolando" in connection with the central sulcus.

The illustrations are numerous and for the most part excellent. The translators deserve great praise for their work. Occasional slips in the use of words are met with, but the book is practically free from disfigurement by Americanisms in style. The indices also deserve special mention. The volume is an important addition to recent neurological literature. We may say that the preface to the fifth German edition is dated June, 1896.

A Record of Indian Fevers, with some Hints on their Etiology, Diagnosis, and Treatment. By MAJOR D. B. SPENCER, Indian Medical Service (Bengal). With 16 Charts. Calcutta: Thacker, Spink & Co. 1899.

ONE of the principal objects which Major Spencer has in view is to obtain recognition for a type of Indian fever which he calls "Tropical Fever," and which he thinks is at present confused with other diseases, such as enteric. His experience has been obtained among the native, and not among the European, troops, but he apparently doubts much whether all the cases in the British hospitals in India returned as enteric or as simple continued fever are really entitled to such designations.

Major Spencer accepts the presently unfashionable theory that true enteric fever can be caused by ordinary decomposing sewage matter, without any specific organism. He thinks that "tropical fever" is due to absorption of putrefactive products from the intestine. This may arise in a hot climate in consequence of the disturbance of the eliminative functions of the skin and liver. The writer admits that this fever closely resembles enteric, but "there is," he says, "this important clinical difference, that tropical fever is very amenable to an eliminative treatment which will cut short its duration to about eight or ten days, sometimes even less; and that a recovery may safely be expected in every case—not so in enteric fever." If the nature of the case is misapprehended, and an expectant instead of an eliminative treatment is adopted, tropical fever, it is said, may continue for two or three weeks or longer, and a fatal result, with ulceration of the intestines, may ensue, as in enteric fever. "The whole thing depends, in fact, upon the treatment."

This line of argument is not altogether convincing to our minds, and we fancy that even the charts will not suffice to bring about such a revolution in medical opinion as the author aims at. We do not for a moment pretend that the present doctrine of enteric fever is sufficient for our needs, but we fear that if we adopted Major Spencer's views, we should not be much better off.

Among the remedies which the author recommends for trial in intermittent fever are neem oil and argemone mexicana. The former is given in divided doses of not more than 20 minims in the twenty-four hours for an adult. Milk is the best vehicle, but failing that, water of chloroform, mint, or nutmeg may be employed. The oil is obtained from the berries of the neem tree (azadirechta indica) which grows all over the plains of India. This oil, it may be remarked, is also valuable, when mixed with an equal quantity of a bland oil, as an application for leprous and syphilitic sores.

The Mexican poppy (argemone mexicana) is a common weed on the Indian plains. The juice of the leaves is given internally in doses of 2 drachms.

The text of this work and the charts are produced in separate little volumes of a handy size. While we cannot at once subscribe to the author's teaching, we recognise how important it is for medical science and practice that when a man's own observations lead him to hit upon a new theory, this should be submitted to the consideration of the profession, together with the data upon which it is based.

The Treatment of Hæmorrhoids and Rectal Prolapse by means of Interstitial Injections. By DUDLEY WRIGHT, F.R.C.S. London: Henry J. Glaisher. 1899.

THERE is nothing novel in the idea of curing these troublesome affections by means of interstitial injections, and we do not think Mr. Dudley Wright adds much to our knowledge in the pamphlet before us. He certainly appears to regard injections as preferable to operative measures, but does not bring much (if any) substantial proof of that position. The injection he recommends consists of equal parts of "Pond's extract" and water, to which is added carbolic acid in the proportion of 1 in 10 parts; of this mixture (we cannot call it a solution) from 5 to 10 minims is injected, the injection being repeated every four or five days. The total number of injections seems to range from eight to fourteen.

We are surprised to find a Fellow of the English College of Surgeons countenancing the use of a secret remedy such as "Pond's extract," especially as the only purpose for introducing it appears to be to give a little mystery to the treatment, for it is plain that the carbolic acid is the active ingredient. Mr. Wright is, we believe, a homœopath, and perhaps the members of that school of physic see nothing wrong in so acting.

On the general question of the use of injections in the manner described, we have only to say, that if patients can be got to tolerate the use of the speculum without an anæsthetic, and are willing to submit to injections two or three times a week for a month or more, they may be rewarded by a cure a little less certain and less complete than by operative procedure. But we doubt much if the game is worth the candle.

Elements of Alkaloidal Ætiology. By A. M. Brown, M.D. London: Henry Kimpton. 1899.

This little book, its preface tells us, is a summary of the views more fully stated in the author's larger work, *The Animal Alkaloids.* These views are to the effect that disease for the most part is due to auto-intoxication from the tissues, and that the so-called pathogenic or specific micro-organisms play a very insignificant part in its etiology. We quote the author's own words:—"It is in the massing of men in large bodies that the typhus of armies originates and spreads. In this case there is a co-operation of auto-typhusation with hetero-typhusation. For those who are in the position of observing and appreciating such facts, it is scarcely possible to escape the conviction that there exists a morbid series, which is as natural as it is evident, leading from the simple form of fatigue fever to that of typhus, which is the highest expression of the poisoning of the organism by itself, or by contact with others under conditions such as now referred to. It is consequently something like an absurdity to introduce micro-organisms into the question." And again—"We must insist that the phenomena of disease, even to the most essential processes, are possible without the intervention of micro-organisms, bacillar or otherwise. And why not? Seeing there are so many diseases without them, such as hydrophobia, to begin with."

These quotations fairly represent the author's theme, and, we might add, his knowledge of bacteriology. His style is somewhat florid, so much so as at times to render the meaning not quite clear. Possibly it is this that deprives the conclusions of that conviction so necessary in a book of this kind.

This book we cannot recommend to our readers.

Aseptic Surgery. By C. B. LOCKWOOD, F.R.C.S. Second Edition. Edinburgh and London: Young J. Pentland. 1899.

IN reviewing the first edition of this book three years ago we expressed the opinion that the author had succeeded in producing a work which was well adapted to the purpose he had in view. In the edition now before us we find that practically no changes have been made from the former, beyond the fact that some of the instructions for preparation of solutions, &c., are more fully given.

We can only endorse our opinion that the book may be safely recommended to anyone who wishes a short description of aseptic methods.

The Throat and Nose and Their Diseases. With 550 Illustrations in colour, mostly designed and executed by the Author, LENNOX BROWNE, F.R.C.S.E. Fifth Edition, revised and rewritten. London: Baillière, Tindall & Cox. 1899.

WE have pleasure in calling attention to the new edition of this well-known treatise. Its authority is so high, and the reputation of its author so great, that any recommendation on our part is needless. It will be sufficient to allude to some of the points in which the present edition differs from its predecessors. The histology, in addition to the gross anatomy, of the organs is described. A chapter has been introduced on bacteriology as applied to diseases of the throat and nose. Separate chapters are bestowed upon diseases of the lingual tonsil, of the pharyngeal tonsil, and of the accessory nasal cavities. Special care has been given to the revision of the sections dealing with infective and malignant processes, and with neuroses of the larynx. The author has had special assistance from Mr. Mayo Collier in anatomy, Dr. James Cagney in nervous diseases, and Mr. Wyatt Wingrave in histo-pathology. The work extends over nine hundred pages. The style is interesting, the printing beautiful, and the extent and character of the illustrations admirable. We regard the book as worthy of the best traditions of British medical literature.

The Diseases of Children: a Clinical Handbook. By GEORGE ELDER, M.D., F.R.C.P.Ed., and J.S. FOWLER, M.B., F.R.C.P.Ed. London: Charles Griffin & Co., Limited. 1899.

THIS manual is designed for the use of students attending courses of instruction in children's diseases, and is intended to emphasise the clinical aspects of the subject. The volume is of a size suitable for the pocket, but it contains, nevertheless, nearly four hundred pages, and the letterpress is unusually small for such a work, so that the matter is very abundant. The authors have evidently got up their subject thoroughly, and those for whom the book is designed will probably show that it is acceptable to them.

Aids to the Diagnosis and Treatment of Diseases of Children (Medical). By JOHN M'CAW, M.D., L.R.C.P. Second Edition. London: Baillière, Tindall & Cox. 1899.

THE appearance of a second edition of the *Aids* to the treatment of diseases of children is sufficient evidence of the practical worth of this little book. The already very full list of diseases treated has been augmented by additional articles on paraplegia, glandular fever, prolapsus recti, and sporadic cretinism. The descriptions, although necessarily very condensed, have still considerable fluency of style, which is so frequently lacking in books of this character. The treatment advocated for the various diseases is thoroughly accurate and well worthy of being followed.

This book of *Aids* has many good qualities, and certainly fulfils the purpose for which it was written.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

SURGERY.

By T. W. JENKINS, M.A., M.D.

Extroversion of Bladder.—Rutkowski (*Centralblatt f. Chirurg.*, No. 16, 1899) describes a case in which he successfully performed the following operation:—1. Median abdominal section; incision, 6 cm. in length, reaching to upper end of bladder. 2. Withdrawal of loop of ileum, and complete section of bowel in two places 6 cm. apart. 3. Junction of proximal and distal ends and isolation of intervening segment of bowel. 4. Longitudinal section of isolated portion along free border, giving a quadrangular flap of about 40 sq. cm., with mesenteric pedicle. 5. Separation of bladder from abdominal wall, and dilatation of opening in bladder. 6. Defect closed by application of intestinal flap by two rows of sutures, the deeper involving the whole thickness of vesical and intestinal walls, the upper taking the form of a Lembert suture. 7. Closure of abdomen. 8. Catheter into bladder. Healing *per primam.* In eight weeks the patient could accommodate 25 c.cm. of urine. The article includes a brief review and criticism of the procedures advocated by different surgeons.

Mikulicz (*Centralblatt f. Chirurg.*, No. 22, 1899) performed a similar operation about the same time as Rutkowski, taking a loop of ileum 12 cm. in length. Adaptation of the intestinal flap was deferred till it was evident that there was no danger of atrophy from circulatory interference. One end was closed, the other sutured to the abdominal wall near the fundus vesicæ. The first operation was performed in June, 1898; the last in February, 1899. The result was good.

Polyadenoma of Large Intestine.—Quénu and Landel (*Rev. de Chirurgie*, April, 1899) describe two cases of this affection hitherto designated polyposis of large intestine, polypous colitis (Virchow), polyposis adenomatosa, multiple adenomata of colon and rectum (Whitehead), disseminated polypi (Cripps). It is of much graver import than the ordinary rectal polypus.

The number of growths is usually very great. They vary in size, from being barely visible to a pigeon's egg. In 40 cases, the disease was found 13 times in the rectum, 9 times in the rectum and colon, 13 times all over the great intestine, 3 times in whole intestinal tract and stomach, 2 times only in colon. It seems to start in the rectum and extend upwards. The growths are composed of the hypertrophied intestinal glands and connective tissue. The disease generally occurs between the ages of 16 and 30. The symptoms are diarrhœa, hæmorrhage, and pain. The stools are composed of liquid fæcal matter with mucus and blood; and sometimes only of large masses of glairy mucus. The liability to cancerous transformation is great, and has been observed in 20 out of 42 cases. Intussusception is not infrequent. Treatment depends upon extension. If very widespread, the author suggests that good might follow sequestration of the colon (the most affected part) by union of ileum and sigmoid flexure.

Surgery of the Heart (Podrez, *Rev. de Chirurgie*, May, 1899).—It is a remarkable fact that wounds of the heart are comparatively seldom immediately fatal. Hours or days, even weeks, may precede the exitus. Of 125 cases collected by Jamain, only 12 caused instant death. That spontaneous cure occurs is proved by several cases cited by the writer. In one, for example, a bullet was found in the wall of the right ventricle twenty years after the accident. The signs of injury to the heart are syncope, shock, hæmorrhage, embarrassed respiration, alteration in heart sounds and pulse, increased area of cardiac dulness. Syncope must be regarded as the main reason why death does not at once follow wounds of the heart; but as it passes off, hæmorrhage will return. Therefore, the rule is—enlarge the wound in the pericardium, eliminate clots, and prevent hæmorrhage by suture.

Wounds of the coronary arteries are invariably fatal.

Reference is made to Bodé's experiments on animals, showing to what extent the heart can be manipulated without danger. Operation is often attended by very great difficulties, but the writer advises extensive resection of part of the thorax, exploration of the heart and pericardium, and suture or tampon according to the nature of the wound. The technique employed by the writer in a case which ended successfully is given in great detail. For particulars, reference must be made to the original.

Popliteal Bursitis.—Monks describes a case of double popliteal bursitis, one bursa containing movable cartilages. A year before, the patient was in hospital for synovitis of one knee of traumatic origin. Both joints were in a condition of chronic arthritis. The writer raises the question of movable cartilages originating in a bursa and slipping into the joint cavity.—(*Boston Medical and Surgical Journal*, 4th May, 1899.)

Metatarsalgia (*Rev. de Chirurgie*, April, 1899).—Péraire and Mally find this affection to be due to a condensing ostitis of the heads of one or more metatarsal bones, and subluxation of the same downwards and inwards. Treatment is by excision. Local anæsthesia suffices. The results are excellent.

Case of Operation for Perforated Gastric Ulcer: Perforation not found; Drainage; Recovery.—Sherman (*Boston Medical and Surgical Journal*, 23rd February, 1898) reports the case of a girl, aged 24, long subject to dyspepsia, and since February, 1897, to frequent hæmatemesis, who, on 8th July, 1898, five hours after taking food, and when lying in bed, had an attack of nausea and vomiting, with sudden sharp pain in the epigastrium, left hypochondrium, left side of neck and shoulder, quickly followed by increasing pulse-rate, abdominal distension, and shock. Sixteen hours later—pulse, 160; temperature, 101·5°; laparotomy. Curved incision just below and along left ribs; escape of gas and turbid fluid. Recent adhesions between stomach and abdominal wall. Fluid continued to well up from behind (there was no perforation on the anterior wall of the stomach); but the organ was so firmly bound down that the opening could not be reached, and it was not deemed advisable to open the stomach as recommended by Keen in such cases. The cavity was therefore irrigated and drained by strips of iodoform gauze. Remainder of abdominal incision closed. The patient progressed favourably, but on 5th August the sinus had to be dilated, as there was slight fever. On 28th October she was well, without local tenderness or dyspeptic trouble.

Craniotomy.—Podrez (*Centralblatt f. Chirurgie*, No. 9, 1899) describes a new conductor for Gigli's saw. After drilling the bone at an angle of 40-45°, he passes from one aperture to the other a watch-spring of a given form (3-4 mm. broad and 13-15 mm. long), furnished with an opening at the distal end, and carrying a ligature which is twice the length of the conductor. One end of the ligature is now attached to the saw; the other remains free. By this means the wire saw is drawn back, and the conductor is left *in situ* to exercise, in virtue of its elasticity, slight pressure on the brain and its membranes, and so preserve them from injury while the saw is being used. Illustrations accompany the article.

Case of Cerebral Sarcoma.—Putnam and Richardson (*Boston Medical* *and Surgical Journal*, 9th February, 1899) describe in detail an interesting case of very extensive cerebral sarcoma. The patient, aged 38, was well till October, 1894, when slight impairment of speech occurred, followed in the course of the next three months by awkwardness in writing, headache, vomiting, numbness of right hand and foot, increased difficulty of speech, optic neuritis. At operation on 14th February, 1895, no tumour was found, but on 25th May it presented at the cranial opening, and was extirpated. The patient improved very much, but recurrence and death happened in December of the same year. The writers regard the case as illustrating the fact that a tumour not discoverable at a primary operation may present itself later at the opening in the skull; secondly, that relief from very distressing symptoms may be won even where cure is impossible; and, thirdly, that mental activity and the power of motion may be preserved in spite of extensive destruction of brain tissue. In this case the greater part of the left hemisphere was occupied by the growth.

X-Rays in Nephrolithiasis.—Wagner (*Centralblatt f. Chirurgie*, No. 8, 1899) controverts the recent statement of Ringel that phosphatic calculi are not detected by the *x*-rays. He has proved the contrary both clinically and experimentally. All depends on the *time exposure*. The less the resistance the longer must be the time.

Appendicitis.—*There is no medical treatment of appendicitis.* Such is the most recent *pronunciamiento* of the *Académie de Médecine.* Dieulafoy and several others condemn in unmeasured terms the routine prescription of rest, opium, the ice-bag, and purgation, and declare it a great wrong to practitioners and the public that such a practice should still be taught. Surgical treatment is the only rational treatment. The moment of intervention is easily settled—within twenty-four hours if the onset is severe, within thirty-six hours if less acute. *Then there would be no more deaths from appendicitis.*

Lucas-Championnière is of the same opinion, but holds that the diagnosis of appendicitis is not always an easy matter. Certain cases characterised by pain with precise location, vomiting, and fæcal stasis are often labelled appendicitis, though in reality forms of *colitis* or *entero-colitis.* In these good results are obtained from evacuants.—(*Le Bulletin Médical*, 15th March, 1899.)

Experiments upon the Germicidal Properties of Blood Serum.—White (*Boston Medical and Surgical Journal*, 23rd February, 1898) gives an interesting account of the work done in this subject, and describes his own experiments. Here we can only summarise his conclusions:—(1) Human blood serum differs greatly in its germicidal action upon various kinds of bacteria; (2) experiments indicate that it is not actively germicidal for the staphylococcus pyogenes aureus or the streptococcus pyogenes; (3) it has a markedly germicidal action on typhoid and colon bacilli, which is preserved even in the late stages of chronic wasting disease.

A copious list of references is added.

DISEASES OF THE THROAT.

By JOHN MACINTYRE, M.B.

Removal of Adenoid Growths.—In the abstracts of this *Journal* for February of this year there appears a reference to a paper by Dr. Frank W. Hinkel, who has been interesting himself considerably in the question of anæsthesia. In the *Transactions of the American Laryngological Association* for 1898, a discussion upon this and other papers of considerable interest appears. A careful study of the different opinions expressed will show that even yet in this very common operation many different views exist upon matters of detail. In the first place, it is interesting to note that a considerable number of distinguished authorities acknowledge recurrence. Dr. Gleitsman, for example, stated in his remarks that it is now generally accepted we have from 3 to 4 per cent of recurrence of the adenoid tissue in operations thoroughly and skilfully performed. Whether this statement be generally accepted or not it is well that such views should be frankly placed upon record. Another speaker, Dr. Hopkins, in this connection related a case operated upon by him three times during two years. A considerable effort was made to thoroughly clear the pharynx, especially after the first operation. His successor in hospital practice has since pointed out that the same patient has been operated upon four times.

Another point of interest in the discussion is that relating to anæsthetics, and here, possibly, the greatest difference will be found in the views expressed by the various speakers. Nitrous oxide, or nitrous oxide ether, ethyl bromide, and chloroform all found different advocates. Two speakers, Drs. Logan and Thrasher, based their preference for chloroform on the grounds of safety, while Dr. Hinkel in his reply goes as far as to say that it does not admit of argument that chloroform is the most dangerous of anæsthetics. Some operators prefer nitrous oxide, maintaining that there is quite sufficient time with this anæsthetic to remove the growth thoroughly. But Dr. Hinkel points out that Dr. Dundas Grant, who introduced the use of nitrous oxide in adenoid operations, gave chloroform in very young children on account of the difficulty in successfully administering the nitrous oxide. Dr. Hinkel, in this connection, points out that there has been no fatal accidents recorded in throat and nose operations under this anæsthetic, and it is the only one of which this can be said. Some operators who use ethyl bromide in practice will be interested to hear that Dr. Roaldes has given ethyl bromide in private and hospital practice 2,500 times successfully without accident, and that Drs. Gougenheim, Luc, and Moure have used the same anæsthesia with safety and satisfaction many hundreds of times. It is very interesting to note that Professor H. C. Wood believes this anæsthesia to be quite as dangerous as chloroform. Dr. Hinkel thinks that it has a much better record so far in this class of cases as chloroform, but that it should be used with care. Dr. Delevan pointed out that ten years ago he used chloroform exclusively, administering it altogether in over 200 cases, but he abandoned it owing to two accidents, fortunately none of them fatal, in favour of ether, which he states is little more irritating than chloroform when properly administered. Dr. Leland recorded one case of fatal hæmorrhage, seven days after an operation, while the child was walking out of doors.

Nasal Insufficiency due to Exaggerated Prominence of the Anterior Arch of the Cervical Vertebræ.—Dr. Dundas Grant, referring to a discussion upon this subject in the New York Academic School of Laryngology and Rhinology, reports the case of a young lady, æt. 14. On examining her naso-pharynx he found a remarkable degree of bulging of the cervical vertebra (atlas and possibly slightly the axis), which diminished the lumen of the arch of the passage between the hard palate and posterior wall of the pharynx to such an extent as almost to prevent the introduction of the finger. The patient suffered also from adenoids, with the patholcgical conditions above described causing it more difficult to remove them. By means of gymnastic exercises, &c., considerable improvement gradually took place. Of course, removal of the adenoids was only a supplementary element of the case.—(*Laryngoscope*, May, 1899.)

Chronic Empyema of the Antrum.—Dr. Dundas Grant records a case in which he first of all made an opening through the alveolar process, followed by the usual treatment of irrigation. The case being somewhat unsatisfactory, the alveolar puncture was allowed to close, anterior turbinectomy was then performed, and, under cocaine, Krause's trocar and canula introduced. The antrum was washed out, and iodoform, and finally iodol, was insufflated. After twelve irrigations through the antra-nasal canula the discharge and smell had entirely ceased, the patient being quite free from any symptoms of antral disease. In this case carious teeth had first been extracted.

Dr. Tilley, in commenting upon this case, said that while he did not for a moment wish to underrate the value of the more radical operations in protracted cases, his contention was that in ordinary cases associated with carious teeth treatment should be commenced by removal of the latter and insertion of a plug, removable for constant irrigation.

Dr. Seanes Spicer joined issue on this (and other points) with Dr. Tilley, and protested against the use of the tooth-socket tubes with a plate for two months in well proved cases of chronic empyema. He maintained that this doctrine was retrograde, and in opposition to recent English, Continental, and American advances. He was of the impression that cases of cure of chronic empyema through tooth-socket were rare. — (*Journal of Laryngology*, February, 1899.)

Foreign Bodies in the Antrum.—Four cases are mentioned by Drs. Cheatle, Grant, Watson Williams, and Hill where foreign bodies had been found in the antrum. Three of these cases were due to the loss of tubes, and in the first mentioned case it was detected by means of the x-rays.—(*Journal of Laryngology*, February, 1899.)

DISEASES OF THE EYE.

By FREELAND FERGUS, M.D.

Some recent experiments conducted by MM. Ulry and Fréynals, and recorded in the *Arch. d'Ophthal.*, show that iodide of potassium, when applied in solution to the conjunctiva, passes with great ease into the anterior chamber. It does not, however, get into the vitreous at all readily when thus administered. Indeed, no trace of it can be found unless it has been applied in sufficient doses to the conjunctiva to cause the urine to give the characteristic reaction with starch.

On the other hand, if average doses are administered by the mouth, the drug can with the starch test soon be discovered in the vitreous. These facts may be of therapeutic value, and at anyrate confirm the usually accepted view as to the fluid currents within the eyeball.

Etiology and Pathology of Anterior Polar Cataract (Nuel, Liège).—In this important communication the author speaks only of anterior polar cataracts, as distinguished from anterior pyramidal cataracts. The former appear as small mother-of-pearl-like spots on the anterior capsule. They are perfectly round, of an apparent diameter of 2 mm., and do not protrude into the anterior chamber; they are situated exactly at the centre of the pupil. Anatomical investigations have shown that they are composed of layers of fibrous tissue beneath the anterior capsule, and that the lenticular epithelium lining this capsule is absent at the area corresponding with the opacity.

The author says that similar cataracts may be observed in process of formation as a result of perforating ulcers of the cornea. The majority of them, however, are accidentally discovered in persons who come complaining of amblyopia, and in whose cases no history can be obtained of previous corneal ulceration. As a rule, these cases are attributed to congenital malformation. Further, the frequent co-existence of corneal opacities, sometimes very slight, has given rise to the idea that they, like pyramidal cataracts, are the result of a previous adhesion between the lens and the cornea.

The fact, however, is usually overlooked that although this form of cataract occupies the centre of the pupil, yet the corneal opacity is found at the lower third of the cornea. In pyramidal cataract, on the other hand, the corneal opacity is at the centre of that membrane.

In simple polar cataract the opacity is generally large, although sometimes not dense, and there may be anterior synechia at the periphery of the iris, leaving the pupilary area free. Such cataracts are by some believed to be the result of corneal perforation in intra-uterine life. Nuel, on the other hand, is of opinion that they are acquired, and that most frequently as a consequence of ophthalmia neonatorum, and that they are not congenital malformations. He himself has seen some cases in which, during the attack, nothing whatever was seen in the pupil, in which there were corneal complications not in front of the pupil, and in which there was no perforation of the cornea, yet in which simple polar cataract developed subsequently. He thinks that ophthalmia neonatorum is not likely by itself to cause the condition, but that there must be corneal complications.

Nuel attributes these cataracts to the presence of the secretions of the intracorneal microbes in the anterior chamber. He says that they are found in the pupil because the other parts of the lens are protected by the iris, which in general is contracted.

Follicular Conjunctivitis and Adenoid Vegetations.—Croppez, of Brussels, has called attention to the various forms of conjunctival disease which are generally classed together under the title of folliculosis. The special object of his paper is to point out that this condition is often associated with adenoid vegetations, and that these cases get better when the vegetations have been thoroughly removed. It is for such cases that Professor Snellen many years ago introduced the practice of sponging out the naso-pharynx with tincture of iodine.

DISEASES OF THE EAR.

By Dr. WALKER DOWNIE.

Otological Experiences during the Naval Battle of Santiago on board the battleship "Iowa." By M. H. Simons, M.D.—Dr. Simons prefaces his remarks by a description of the two kinds of powder used on board the *Iowa*. One is brown in colour, in large hexagonal prisms, and is slow-burning. Its incomplete combustion gives rise to a quantity of dust, which blows back on the men, discolouring their clothes and skin, and it also causes a mild, though speedy passing, irritation of the conjunctivæ and air-passages. The second form was "smokeless" powder made of gun-cotton. When burned in large quantities it produces a very evident smoke, not so dense, however, as to interfere with the gunners' aim, though it dulls the telescopic sights. Although a large quantity of carbonic oxide gas is formed when it is fired, no cases of poisoning by the gas were noticed. After it is fired the atmosphere of the deck is somewhat hazy, there is a mildly acid odour noticeable, there is irritation of the conjunctivæ and the air-passages. During the first few days of the fight off Santiago, there were four cases of acute tonsillitis, one of acute bronchitis, and twenty-four of bronchial catarrh. In all of these there was acute rhinitis, and in thirteen cases there was marked deafness, so that the watch could be heard on contact only.

The cause of the deafness was of a double character. The inflammation set up by the gas in the nose and throat caused closure of the pharyngeal opening of the Eustachian tubes, and the concussion from the firing of the guns drove in the tympanic membranes, forcing out a portion of the air contained in the middle ears. The membranes were cup-shaped, and the manubrium unduly prominent. Treatment consisted in the use of a steam atomizer, M. Dobell's solution, and in from two to four days the cases were well, the return of hearing being usually preceded by a "click." In two cases only was the membrane ruptured, and in these the injury was caused by the concussion resulting from the firing of the eight-inch gun. In both, the men were knocked down by the concussion.—(*The Laryngoscope*, May, 1899.)

Books, Pamphlets, &c., Received.

Our Baby: for Mothers and Nurses, by Mrs. Langton Hewer. Sixth Edition, revised. Bristol: John Wright & Co. 1899. (1s. 6d.; cloth. 2s. 6d.)

Two Lectures on the Temples and Ritual of Asklepios at Epidaurus and Athens, delivered at the Royal Institution of Great Britain, by Richard Caton, M.D., F.R.C.P. Reprinted from "Otia Merseiana." 1899.

An Introduction to Dermatology, by Norman Walker, M.D. With a Frontispiece, 29 Plates, and 34 Illustrations in the text. Bristol: John Wright & Co. 1899. (8s. 6d. net.)

Intestinal Obstruction: Its Varieties, with their Pathology, Diagnosis, and Treatment, by Frederick Treves, F.R.C.S. With 118 Illustrations. New and Revised Edition. London: Cassell & Co., Limited. 1899. (21s.)

On the Relation of the Nervous System to Disease and Disorder in the Viscera, being the Morison Lectures delivered before the Royal College of Physicians in Edinburgh in 1897 and 1898, by Alexander Morison, M.D. Edinburgh: Young J. Pentland. 1899.

Manual of Human Physiology, by Leonard Hill, M.B. With 173 Illustrations. London: Edward Arnold. 1899. (6s.)

Extra-Uterine Pregnancy: A Clinical and Operative Study, by John W. Taylor, F.R.C.S. Eng. With 65 Illustrations and Diagrams, mostly original. London: H. K. Lewis. 1899. (7s. 6d.)

International Directory of Laryngologists and Otologists, containing Names and Addresses of Practitioners engaged in the Study and Practice of Laryngology and Otology, compiled by Richard Lake, F.R.C.S. London: The Rebman Publishing Co., Limited. 1899.

A Text-Book of Anatomy, edited by Frederic Henry Gerrish, M.D. Illustrated with 950 Engravings in Black and Colours. London: Henry Kimpton. 1899. (27s. net.)

The Medical Complications, Accidents, and Sequelæ of Typhoid or Enteric Fever, by Hobart Amory Hare, M.D., B.Sc.; with a special chapter on the Mental Disturbances following Typhoid Fever, by F. X. Dercum, M.D. London: Henry Kimpton. 1899. (10s. 6d. net.)

Sixty-Fourth Annual Report of the British Medical Benevolent Fund, for the Year 1898. London: Morton & Burt. (6d.)

The Ready Reference Handbook of Diseases of the Skin, by George Thomas Jackson, M.D. With 75 Illustration. Third Edition, revised and enlarged. London: Henry Kimpton. 1899. (10s. 6d. net.)

Encyclopædia Medica, under the general editorship of Chalmers Watson, M.B., M.R.C.P.E. Vol. I: Abdomen to Bone. Edinburgh: William Green & Sons. 1899.

The Principles of Bacteriology: A Practical Manual for Students and Physicians, by A. C. Abbott, M.D. Fifth Edition, enlarged and thoroughly revised. With 109 Illustrations, of which 26 are Coloured. London: H. K. Lewis. 1899. (12s. 6d. net.)

The Cerebro-Spinal Fluid: Its Spontaneous Escape from the Nose, with Observations on its Composition and Function in the Human Subject, by StClair Thomson, M.D. London: Cassell & Co., Limited. 1899.

A Record of Indian Fevers, with some Hints on their Etiology, Diagnosis, and Treatment, by Major D. B. Spencer, Indian Medical Service (Bengal). With 16 Charts. Calcutta: Thacker, Spink & Co. 1899.

Manual for the Church Lads' Brigade Medical Corps. Second Edition. London: The Church Lads' Brigade, The Church House, Dean's Yard. 1899. (6d.)

The Retrospect of Medicine, edited by James Braithwaite, M.D. Vol. 119 (January to June, 1899). London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. (6s. 6d.)

A System of Medicine by Many Writers, edited by Thomas Clifford Allbutt, M.A., M.D., LL.D. Vol. VII: Diseases of the Nervous System (continued). London: Macmillan & Co., Limited. 1899. (25s. net.)

Medical Gymnastics, including the Schott (Nauheim) Movements: being a Text-Book of Massage and Mechanical Therapeutics generally, by Axel V. Grafstrom, B.Sc., M.D. With 11 Pen and Ink Sketches by the Author. London: The Scientific Press, Limited. 1899. (2s. 6d.)

Modern Cremation: its History and Practice, by Sir H. Thompson, Bart., F.R.C.S., M.B. Lond. Third Edition. Revised and much Enlarged. London: Smith, Elder & Co. 1899. (2s.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 22ND JULY, 1899.

	Week ending			
	July 1.	July 8.	July 15.	July 22.
Mean temperature, . .	56·9°	60·5°	59·8°	61·9°
Mean range of temperature between day and night, .	13·6°	15·6°	12·9°	14·7°
Number of days on which rain fell, ...	5	3	6	3
Amount of rainfall, . ins.	2·58	0·23	2·31	0·52
Deaths registered, . . .	248	256	242	261
Death-rates, ...	17·6	18·1	17·1	18·5
Zymotic death-rates, . .	2·1	3·0	2·1	3·7
Pulmonary death-rates, .	4·9	4·2	4·0	4·0
Deaths—				
Under 1 year, . . .	48	50	51	64
60 years and upwards, .	43	47	43	50
Deaths from—				
Small-pox, ...	...	...	...	...
Measles, ...	11	21	8	15
Scarlet fever, . . .	6	5	1	6
Diphtheria, . . .	2	...	1	1
Whooping-cough, . .	...	3	2	3
Fever, ...	...	1	2	1
Diarrhœa, ...	11	13	15	26
Croup and laryngitis, .	...	2	2	1
Bronchitis, pneumonia, and pleurisy, . . .	43	28	29	31
Cases reported—				
Small-pox, ...	...	...	...	...
Diphtheria and membranous croup, ...	7	15	4	10
Erysipelas, . . .	18	22	17	22
Scarlet fever, . . .	63	91	45	67
Typhus fever, . . .	...	...	...	...
Enteric fever, . . .	7	19	10	20
Continued fever, . .	...	...	...	...
Puerperal fever, . .	...	1	1	...
Measles,* . . .	274	280	156	137

* Measles is not notifiable.

Sanitary Department,
Glasgow, *26th July, 1899.*

THE

GLASGOW MEDICAL JOURNAL.

No. III. SEPTEMBER, 1899.

ORIGINAL ARTICLES.

ON THE STATE OF THE KNEE-JERK IN CASES OF CEREBELLAR TUMOUR.

BY C. O. HAWTHORNE, M.D.,

Medical Superintendent of the Medical Graduates' College and Polyclinic, London; formerly Senior Assistant to the Professor of Medicine in the University of Glasgow.

THE facts in relation to the condition of the knee-jerk in cases of tumour of the cerebellum are at first sight very puzzling. In some instances the knee-jerks are exaggerated, in others they are abolished, whilst in a third group they are normal, and in a fourth they vary greatly in different stages of the same case. The authority of Gowers[1] on this point is as follows:—"In some cases of tumour of the middle lobe the knee-jerk cannot be obtained. Its loss is often not constant; a slight movement may be elicited at times and at others none. . . . Many . . . symptoms are produced by cerebellar disease that exerts pressure. The pyramidal tracts often suffer thus, and hence the limbs are weakened, and the weakness is accompanied by the usual increase of myotatic irritability. Thus, in one case of cerebellar tumour there may be no knee-jerk, and in another it may be increased." The same author affirms that the pressure on the motor tracts may be only sufficient to produce slight weakness of the limbs, and yet quite enough to lead to an increased knee-jerk and the presence of ankle-clonus. He also implies that this exaggeration of the tendon phenomenon is the more common departure from normal in cases of cerebellar tumour, the loss of the knee-jerk previously described being only an exceptional event.

---

[1] *Diseases of the Nervous System*, second edition, vol. ii, pp. 321, 509.

In a recent series of seven cases, each regarded on clinical evidence as a case of tumour of the brain (the age of the patients ranged from 10 to 17 years), the knee-jerks were absent in three; in one of these, the jerks were present at first but disappeared under observation. In a fourth case the knee-jerks were at first exaggerated, and subsequently disappeared; still later, the left lower limb became paralysed from, it was believed, pressure of a cerebellar growth on the motor tract; in this limb the knee-jerk returned and became, indeed, unduly marked, but from the non-paralysed limb the jerk remained absent. In a fifth case the knee-jerks are noted as "almost certainly deficient." Of the above five cases it could be said, with a considerable amount of confidence, that in three of them the tumour was with great probability in the cerebellum, the other two being deficient in localising evidence. The two remaining members of the series had normal knee-jerks, and here also there was no suggestion as to the site of the tumour.

Exaggeration of the knee-jerks has been recorded by Gee[1] in gliomatous enlargement of the pons and medulla; by Angel Money[2] in a similar case; and by Chaffey[3] in two cases of multiple tubercular growths (1) in which the medulla, pons, and lateral cerebellar lobes were involved, and (2) in which the tumours were present in each occipital lobe and in the left lobe of the cerebellum.

On the other hand, Beevor[4] has described diminution of the knee-jerk with multiple sarcomatous growths of the left cerebellar hemisphere, left middle peduncle, and left side of pons; Ogilvie and Strugnell,[5] with a soft glioma of the posterior half of the left lateral ventricle and posterior two-thirds of the left optic thalamus; Handford,[6] with a sarcoma of the middle lobe of the cerebellum; and Sinkler[1] has noted "lessening of the knee-jerks," with a soft gliomatous mass on the dorsum of the pons and medulla. Further, Lees[2] has found the knee-jerks to be absent in some cases of cerebellar tumour; Anderson[3] has the same experience; and Gowers[4] quotes a case in which, with a tumour in one cerebellar hemisphere, the knee-jerk was lost only on the opposite side, and another in which, with the same conditions, the loss was on both sides. It may be remarked, too, that both Lees[5] and Buzzard[6] agree that the knee-jerk is absent in some cases of cerebral meningitis.

---

[1] *St. Bartholomew's Hospital Reports*, 1881, vol. xvii, p. 287.

[2] Medico-Chirurgical Society's *Transactions*, 1883, vol. lxvi, p. 283.

[3] Pathological Society's *Transactions*, 1885-86, vol. xxxvii, pp. 63, 85.

[4] *Ibid.*, p. 86.

[5] *Ibid.*, p. 53.

[6] *Brain*, 1892, vol. xv, p. 458.

These statements of fact are of obvious importance to the clinical observer, but when one tries to seek out a satisfactory explanation for the phenomena they record, the prospect is somewhat bewildering. Possibly one cannot anticipate such an explanation until our knowledge of the functions of the cerebellum is much more exact and confident than it is at present. But some help towards at least a temporary mental resting-place may be found by recognising some suggestions which have been offered as to the relationship between the manifestation of the knee-jerk on the one hand, and the activity of the cerebral cortex and cerebellum on the other. It is generally allowed that, given an interruption of the motor tract between the cerebral cortex and the motor cells of the anterior cornu of the spinal cord, there is sooner or later an exaggeration of the tendon phenomenon, this result, it is suggested, being due to interference with the descent of the restraining or inhibitory influence of the higher centres. A tumour in the cerebellum may well cause pressure on the motor tract as this passes downwards through the pons and medulla, and may thus, in harmony with the above doctrine, lead to exaggeration of the knee-jerks. The result is exactly parallel to the exaggeration of the knee-jerk which results when the motor tract is interrupted, as by a lesion in the internal capsule, sclerosis of the lateral columns, &c.

For a possible interpretation of the loss of the knee-jerk in some cases of cerebellar tumour, we may recall the hypothesis suggested by Hughlings Jackson[1] in reference to the relation of the cerebellum to the tendon-jerks.

---

[1] *Transactions of the College of Physicians*, Philadelphia, 1896, vol. xviii, p. 68.

[2] *Clinical Journal*, vol. ii, p. 162.

[3] *Ophthalmic Review*, 1886, vol. v, p. 121.

[4] *Op. cit.*, p. 321.

[5] *Clinical Journal*, vol. ii, p. 162.

[6] *Ibid.*, p. 145.

According to this view, the motor cells in the anterior cornua of the cord are the recipients of streams of energy both from the cerebral cortex and the cerebellum. The influence of the cerebral cortex is to establish in the reflex arc on which the knee-jerk is directly dependent conditions which make the production of the knee-jerk difficult or impossible. On the other hand, the action of the cerebellum is directly the opposite of this. The cerebellar influence on the motor cells of the spinal cord is such as to establish in the reflex arc commanding the knee-jerk conditions which facilitate the production of the jerk. In a word, the influence of the cerebral cortex is to restrain the manifestation of the knee-jerk; the influence of the cerebellum is to heighten that manifestation. Interrupt the motor tract between the cerebral cortex and the grey matter of the cord, and the ganglion cells in the grey matter are handed over to the unantagonised influence of the cerebellum. Conversely, when the stimulating action of the cerebellum is removed, the ganglion cells are dominated by the restraining influence of the cerebral cortex.

If this position in relation to the influence of the cerebellum is adopted—and Bastian[2] has advanced a number of arguments in support of it—it is not difficult to understand that one of the results of a cerebellar tumour may be the abolition of the knee-jerk. On the same lines, too, it may be possible to advance a step further, and to suppose that a tumour of the cerebellum by at one time irritating some of the cerebellar structures, and thus causing an excess in the outflow of cerebellar energy, and at another time by interfering with the discharge of such energy, may lead to a varying condition of the knee-jerk in different stages of one and the same case. It can hardly be pretended that this theory is entirely satisfactory, but as a working hypothesis for clinical purposes it has considerable interest. Difficulties are provided by such cases as that of Ogilvie and Strugnell[3] already quoted, where the knee-jerk was lost though the tumour occupied not the cerebellum but the posterior part of the left lateral ventricle; the loss of the knee-jerk in some cases of cerebral meningitis is also significant from the same point of view. Still, whilst admitting these, and possibly other difficulties, the suggested methods by which a tumour of the cerebellum may modify the healthy knee-jerk—viz., (1) by pressure on the motor tract; and (2) by disturbance of an exciting influence normally exercised by the cerebellum on the reflex cells of the spinal cord—may be profitably kept in view by the clinical observer. They will at least stimulate him to careful and exact observation, and this may some day bring as its reward a combination of events that will not only solve a difficult pathological problem, but will at the same time throw a much needed ray of light on a dark chapter of physiological science.

---

[1] *Medical Examiner*, 5th April, 1877, and 28th March, 1878; *Medical Times and Gazette*, 12th February, 1881; *Lancet*, 1896, vol. ii, p. 1663.

[2] *Paralyses, Cerebral, Bulbar, and Spinal*, pp. 219, 341; Medico-Chirurgical Society's *Transactions*, 1890, vol. lxxiii, p. 151.

[3] Pathological Society's *Transactions*, 1885-86, vol. xxxvii, pp. 63, 85.

SIX CASES OF RASH AFTER ENEMATA.

By T. K. MONRO, M.A., M.D.,

Physician to the Royal Infirmary and Examiner in the University of Glasgow.

ONE of the purposes of this paper, which does not profess to teach anything that is original, is to call attention anew to the fact that enemata may give rise to cutaneous rashes—a fact that is by no means so generally known as it ought to be among those who attend upon the sick. And another purpose, which is of equal importance in a doctrinal aspect, is to point out that one question remains to be solved—namely, whether, on the one hand, a large enema of water alone is sufficient, or whether, on the other hand, soap (*a*) of some kind or (*b*) of a particular kind is requisite in addition.

It is surprising to find how the fact that a rash may occur after enemata escapes without mention in important text-books on dermatology. There can be little doubt that the rash is frequently seen and wrongly explained. Thus, it may be attributed to a surgical operation or to an anæsthetic. This fallacy was escaped in one case through the rash appearing before the operation was begun (Suckling). It is likely that some cases of so-called surgical and puerperal scarlatina are instances of a scarlet rash due to enemata.

Cases of this kind cannot be explained away as drug-eruptions.[1] Sometimes, it is true, drugs have been administered, though this does not necessarily render the example a doubtful one. For instance, it would scarcely be fair to attribute a rash observed on one day to a hypodermic injection of morphia given at 2 A.M. on the preceding day (Case III). But any doubt on this point is set at rest by the appearance of a rash in cases where no question of drugs can arise. Moreover, in two of my cases, a repetition of the enema was followed by a reappearance of the rash, and a case has been recorded where the rash persisted for more than a week owing to each one of the enemata, which were administered every second day, giving rise to an exacerbation of the cutaneous irritation.

So far as I have been able to ascertain, the published cases are confined to the English language, and, with a doubtful exception, to British literature.

One case has been recorded in a boy of 11 years; all the other published cases, some twenty-six in number, appear to have been females, and the following six cases of my own were all females. The two writers who have published the largest collections of cases—namely, Burford (who first drew attention to the condition) and Gardner, gained their experiences chiefly in gynæcological work. Two of the six cases that follow, and another one which I was asked to see, but of which I have not detailed notes, were in patients suffering from gastric ulcer. Habitual constipation, whether primary or secondary to gastric disorder, seems to be the condition which is most nearly fulfilled by all the cases in common, and which best accounts for the overwhelming preponderance of the female sex.

The patients are generally adults. Gastric and enteric cases are likely to be between 20 and 26 years of age; gynæcological cases will probably be rather older, as a rule. The rash, however, has been observed in childhood.

The rash may occur in an individual who has previously used enemata without any untoward result. It is possible that the recumbent posture may favour it.

A second enema may again induce a rash, and in the same patient a third enema may or may not induce it.

The interval that elapses between the administration of the injection and the appearance of the eruption is commonly about twelve hours; but it may be more than twenty-four hours, or it may be as short as two hours. In a case where enemata were given every second day, and the rash recurred on each occasion, the first interval was six hours, and each later one three hours (Coupland).

---

[1] A fallacy may underlie some reported cases of drug-eruption. For instance, Morrow quotes from Bruzelius, as an example of rash due to boracic acid, a case where two pints of a solution of this drug were given as an injection *per rectum*. Morrow's editor, Dr. Colcott Fox, significantly introduces and italicises these last two words ("Drug Eruptions," by Prince A. Morrow, in *Selected Monographs on Dermatology*, New Sydenham Society, 1893, p. 401).

The duration is usually two or three days; but it may be twenty-four hours or less, or it may be four days.

Three principal types of eruption may be distinguished—the scarlatiniform, the measly, and the small-whealed urticarious; but two or all of these may be present in one individual. The first variety is of special importance because it may give rise to fears of scarlatina, and the third because of the severe itching with which it may be associated. A rash has been observed to maintain the urticarious form for twenty-four hours, and then to become scarlatiniform for a few hours, after which it reverted to the original type (Moorhouse).

Either the objective or the subjective phenomena may first attract attention. Thus, the friends may notice the redness of the face before the patient is aware that anything is wrong. Or the itching of the skin may lead to the discovery of the rash.

The distribution varies in different cases, and is not always strictly symmetrical. The buttocks and thighs, and next to these, perhaps, the face, may be considered the seats of predilection; but, as the following reports show, the rash may involve almost all parts of the body.

As a rule, the eruption is not associated with pyrexia, and any acceleration of the pulse is unimportant. Quite exceptionally, a temperature of 101° or 102° has been observed.

In a few cases the throat has been slightly sore, or at least reddened.

The tongue may appear unduly red, or may be furred; but these conditions may be connected with the digestive or other trouble for which the enema is administered.

In one or two of my cases the patients have had headache, sickness and vomiting; but whether the agent that caused the rash was also the cause of these symptoms is not certain.

The rash may be associated with a severe burning sensation and intense itching. This is an important point in differentiating the case from scarlatina; but it must be remembered that, even in the urticarious variety, the itching may be very slight.

In one case desquamation occurred after the rash had been out for three days (Coupland); but this feature is quite exceptional.

The urine remains free from albumen. Staveley asserts that in cases of this kind indican can be detected in the urine, whereas it is rarely to be found in the early stages of scarlet fever, and he accordingly recommends this as a valuable diagnostic point. Different observers, however, have failed to obtain the indican reaction, so that the test cannot be relied upon.

The rash occurs only after the use of bulky injections, and never, so far as I am aware, after glycerin or nutrient enemata.

It has been generally supposed that the eruption is the result of fæcal absorption, the large quantity of warm water softening the solid contents of the intestines, and doubtless dissolving some of them, so that a considerable quantity of excrementitious matter is rapidly absorbed. This being partly excreted by the skin gives rise to the rash. Morgan, however, suggested in 1895 that the cutaneous lesion resulted from the use of a particular kind of soap in the enema, and shortly afterwards Gardner brought forward a considerable number of cases in which he had observed a rash after the use of hard yellow soap, while, on the other hand, he had met with no rash in 400 cases where soft soap was employed. Accordingly he concurred in the view that the particular variety of soap was the main factor in the production of the rash. Gardner found that the hard soap contained a trace of iron, and was very slightly alkaline in reaction.

Burford, in his original description, stated that the eruption follows 3 to 4 per cent of the enemata administered, and that any fluid will do if used in sufficient quantity. It is not clear, however, that he experimented with different kinds of soap. Staveley says that the rash is common, not only after enemata, but also after the administration of a brisk aperient in chronic constipation, and in the later stages of acute intestinal catarrh when peristalsis is restored to the paralysed gut.

An objection to the theory that the kind of soap employed is responsible for the rash is that the enema may be repeated in some of the cases without causing a reappearance of the rash. In one of my cases the first two enemata were followed by rashes, and the third was not, although the same variety of soap was used on all occasions. On the theory of absorption the explanation of this is that the earlier enemata cleared away the fæcal accumulations. The other theory implies that a small proportion of individuals have an idiosyncrasy towards hard soap, but it is not so easy to see why this should cease to manifest itself after one or two enemata.

Thus far, however, the lesson of experience is that soft, and not hard, soap ought to be used for enemata. By attention to this we may hope to avoid the rash altogether, and whether the hope is realised or not, the question as to the immediate cause of the rash will be so much nearer its settlement.

CASE I.—Mrs. H., æt. 25, was admitted to the Royal Infirmary under my care on 2nd August, 1895, on account of hæmorrhage from gastric ulcer.

The following note was made on the 17th:—Two evenings ago a rash was noticed on patient's arms, and just afterwards she became conscious of itching in the affected parts. Before morning the eruption had spread over the whole body. At the present time there is a very slight eruption on the face. It was more marked here yesterday, though patient seems not to have been aware of the fact. It is well marked on the right upper arm and fore-arm, and also in the right lateral aspect of the chest. There is much less on the left upper limb, though traces of it are seen on the back of the fore-arm—chiefly in the form of little red papules. It is present to a slight extent on the palms and dorsa of both hands. It is present very slightly on the left lateral aspect of the chest. The front of the trunk, the interscapular region, and the lumbar region are free. The rash, on the other hand, is well marked over both hips. It is present over almost the whole circumference of the right thigh, and less generally over the left thigh. It is less marked, though still discernible, over the legs below the knees.

Where it is best marked, the rash is an erythematous blush, but it is not sharply defined at the margins, where it shades off into the normal skin by means of somewhat detached spots or patches. The diffuse erythema becomes pale yellow on pressure. At some places, *e.g.*, at the flexure of the right knee, the rash is distinctly raised, and the raised spots and patches exactly resemble the eruption of measles.

For about a week before the date of the above note, the patient had vomited everything she took into the stomach. She had therefore been fed by nutrient suppositories, and still more by enemata containing milk, eggs, and beef-tea. Moreover, laxative enemata had been administered once in two or three days; these consisted of soap and warm water, with, on one occasion, castor oil. On the 13th August a fly-blister was applied to the epigastric and left hypochondriac regions, and on the 16th (the day after the rash appeared) she was ordered a mixture of dilute hydrocyanic acid and chloroform water for the sickness.

The temperature on the morning of the 17th was 100°: on the preceding night, 98·8°. The maximum previously observed was 99·4° on the 13th, before which the temperature was normal or subnormal. There was vertical headache. The urine was free from albumen.

CASE II.—B. C., 22, domestic servant, who had previously enjoyed good health, suffered for a few days in August, 1896, from pains and tenderness in the lower abdomen, with pain in the urethra on micturition. As the bowels had been confined for three days, a soap and water enema was given at 9 P.M. on the 9th, and the bowels moved about twenty minutes later. About the same time, and also at 4 A.M. on the 10th, she was given 15 minims of chlorodyne to relieve the abdominal pain. On the afternoon of the 10th, patient was sleeping and perspiring, and on waking at 4 o'clock felt her skin itchy. Shortly afterwards the rash was seen.[1] In a note taken an hour afterwards it is stated that the rash was intensely itchy, and of a measly character, consisting as it did of dull red patches, with outlying, very slightly raised spots. The spotted arrangement was seen over practically the whole back, but the more uniform redness was present in the sacral region, and very markedly over the buttocks. It was less intense on the thighs, slight at the flexures of the knees, well marked at the flexures of the elbows, very marked on the right flank. The fore-arms and neck were practically free. The face, apart from a little itching about the nose and eyes, was intact. Only a very few spots resembling wheals could be detected. A lotion of carbolic acid gave great relief to the itching, and, under treatment by bromide of potassium, the dysuria and abdominal pain speedily subsided.

On the 11th, the rash could be detected on the dorsa of both feet and of one hand, and also on the neck. There was none on the face. There was now a more uniform redness on the chest instead of spots. The rash was beginning to fade away from the buttocks. Distinct urticarious wheals could now be observed on the chest. Itching was still troublesome.

---

[1] The six cases are given in chronological order, and not in the order of their value. Manifestly in this instance, the chlorodyne introduces an element of suspicion.

Patient had no fever, and had been getting light diet. She had never had an enema, or chlorodyne, or any illness before the present occasion. By the 13th the rash was almost gone, and the abdominal pain had ceased.

CASE III.—A. B. was seized with severe pain in the region of the sigmoid flexure early in the morning of the 7th November. Enemata were given as follows:—(1) At 3·15 A.M., 2 pints of soap and water, with 2 oz. of olive oil—all retained; (2) at 5 A.M., 1 pint made up in a similar way—returned with a little fæcal matter; (3) at 9 A.M., 1 pint of soap and water—returned immediately with a little fæcal matter. Patient also got morphia hypodermically, at about 2 A.M. On the morning of the 8th, at 8 A.M., patient's face was observed to be red and she was asked the reason, but she had been quite unaware of the fact. After she washed her face, however, she felt it hot. In the course of the forenoon, the diffuse redness could still be observed in the face, and it could be seen to a slight extent on the back of the left hand and fore-arm.

CASE IV.—Miss M., governess, had a breakfast of tea, toast and butter, on 23rd November. At 9 A.M. she had an enema consisting of 2 pints of soap and water, the bowels moving freely a quarter of an hour later. The urine was normal. At 12·30, chloroform was administered, but no operation was performed. At 4 P.M., she had tea, toast and butter, and biscuit. At 7 P.M. she complained of severe pains shooting through all parts of her head. There was no shivering. The temperature was 98·4°. The nurse observed a red rash at the sides of the neck, and on examining the body and limbs saw the eruption developing; she noticed especially a large patch on one upper arm. During the night, sickness and vomiting occurred, and the skin felt hot and itchy, especially at the flexures. The throat was not sore.

The rash appears to have spread all over the body, and was even noticed between the fingers, but by the afternoon of the 24th it was not conspicuous on the face or hands. It was well marked over the whole posterior aspect of the trunk, and while still manifest on the leg, was particularly well developed on the thigh and buttock. The rash was in no way measly, but a diffuse red eruption like a blush. The headache and sickness were now gone (5·30 P.M.), and the skin felt less hot. The anterior pillars of the fauces were somewhat red, but otherwise the throat seemed healthy, and it felt to the patient quite well. The tongue was but slightly furred, and had no "strawberry" appearance. The pulse was 102 to 107.

TEMPERATURE (MOUTH).

Nov. 22, 9 P.M.,	97·2°	Nov. 24, 7 P.M.,	99·6°	P., 102
,, 23, 7·30 A.M.,	98·0°	,, ,, 9 P.M.,	99·8°	P., 106
,, ,, 7 P.M.	98·4°	,, ,, 12 midn.,	99·2°	
,, 24, 7·30 A.M.,	98·0°	,, 25, 7·30 A.M.,	98·0°	P., 80
,, ,, 9 A.M.,	98·4°	,, ,, noon,	98·4°	P., 78
,, ,, 1 P.M.,	99·2°	,, ,, 4 P.M.,	98·8°	P., 78
,, ,, 3 P.M.,	99·4°	,, ,, 8·35 P.M.,	98·0°	P., 72
,, ,, 5 P.M.,	99·6°	,, 26, 7·30 A.M.,	98·6°	P., 64

I had been summoned in haste to see this patient, as the nurses in attendance upon her were afraid she had scarlet fever; and as a matter of fact, she had come to Glasgow from a fever-stricken village, though personally she did not consider that she had been exposed to infection.

On the 25th, the redness was still present over the trunk and limbs, but it was now rather mottled and tending to fade. The face, especially about the eyes, was even more swollen than on the preceding day, its appearance being thus somewhat suggestive of urticaria. The urine passed during the night was highly coloured, and deposited abundant urates; the reaction was acid, the specific gravity 1032, and there was no albumen or sugar.

On the 26th, patient felt perfectly well. The face was still somewhat swollen under the eyes, and it was slightly flushed; the latter condition was much aggravated after washing. The rash was gradually disappearing all over, and had practically gone from the extremities of the limbs, but it was still recognisable on the back and upper arm, and was well marked on the hip and upper part of the thigh. Patient left Glasgow on that day.

CASE V.—C. D., æt. 22, became distinctly ill on 26th December, at what was probably the commencement of the second week of enteric fever. On that day she had four dark loose motions. The next motion was at 12·45 P.M. on the 29th, after an enema of hot water with white soap and castor oil, administered at midday. It was dark brown in colour, and consisted partly of hard fæcal masses and partly of liquid. Patient wakened at 1·45 in the following night complaining of itchiness of the fore-arms, neck and face, and her nurse found that this was associated with an urticarious rash. Two hours later the rash began to disappear from the arms, and to appear on the inner aspect of each knee, and thereafter on the thighs, flexures of the elbows, shoulders and groin. Distinct wheals were present in several of the regions named; on the back and on the buttocks, the eruption was measly. At 8 A.M., there was a uniform red rash on the back of the neck. When the rash began to fade, the itching subsided, and by 10 A.M., though the face was still red, the itching was gone. The temperature and pulse were not affected.

Enemata were given at 4, 5, and 6 P.M. on 1st January. The bowels moved at 10·30 P.M., and at the same time patient vomited. On the following morning a rash appeared on the face, neck and trunk. During the night the flexures of the elbows had felt itchy, but nothing abnormal could be seen there. The rash itself was measly but not itchy. In the forenoon there was a slightly papular condition of the flexures of the knees and elbows, without any redness, whilst on the abdomen there was a measly rash. Next day (3rd January) pale papules were still present on the wrist.

A third enema, consisting of soap and water, was given on the 5th, and was not followed by any eruption. A dose of castor oil taken by the mouth caused no rash.

This patient was habitually costive and was accustomed to use glycerine suppositories. She had sometimes employed enemata of soap and water, but had never before her present illness been troubled with a rash following them.

At 8, 12, and 4 o'clock in the night of the 28th to 29th, she had sleeping draughts containing syrup of choral 1 dr., and bromide of potassium 15 grs. These were not required again.

CASE VI.—E. F., æt. 23, confined to bed by severe hæmorrhage from gastric ulcer, was fed for the first few days by nutrient enemata, and also got Epsom salts by the mouth. On 18th October, an enema of water, soap and castor oil was given without result. This was repeated at 6 A.M. next day, and an evacuation was obtained shortly afterwards. At 11·30, a rash appeared on the face, hands and thighs. The face was red, but elsewhere the eruption was mainly in the form of itchy papules which were scarcely recognisable by their colour. Next day the face was still red, and in the course of the day the whole body became covered with pale itchy papules, which the patient described as feeling to the touch exactly like goose-skin. The temperature remained below 100°.

An enema of soap and water was given at 8 P.M. on the 25th, and a rash had appeared by 7 A.M. next day.

REFERENCES.

G. H. Burford, *Lancet*, 1888, ii, p. 1171.
C. W. Suckling, *British Medical Journal*, 1894, i, p. 1190.
W. H. C. Staveley, *British Medical Journal*, 1894, i, p. 1413.
W. H. Coupland, *British Medical Journal*, 1894, ii, p. 867.
A. K. Morgan, *British Medical Journal*, 1895, i, p. 698.
G. E. Hale, *British Medical Journal*, 1895, i, p. 474.
H. B. Gardner, *Lancet*, 1895, ii, p. 912.
J. E. Moorhouse, *British Medical Journal*, 1897, i, p. 1347.
C. A. Hill, *British Medical Journal*, 1897, i, p. 1477.

THE BACILLUS COLI COMMUNIS IN PUERPERAL SEPTICÆMIA.[1]

BY JOHN M. MUNRO KERR, M.B., C.M.,

Assistant to the Professor of Midwifery, University of Glasgow ; Assistant Physician, Maternity Hospital ; and Dispensary Physician for Diseases of Women, Western Infirmary, Glasgow.

I BRING under your notice this evening two cases of puerperal septicæmia in which pure cultures of bacillus coli communis were found. The cases illustrate two very important truths which are not yet fully appreciated by those engaged in the practice of obstetrics.

1. Other organisms than streptococci are the causes of puerperal septicæmia.
2. Severe, even fatal, as well as mild examples of the disease may result from these other organisms.

That I am correct in saying these two truths are not fully appreciated, is evidenced by the many written and spoken protests at the present time to the promiscuous employment of the antistreptococcic serum. The following are the two cases:—

CASE I.—S. M., æt. 22, primipara. Delivered at Maternity Hospital while I was on duty on 1st September, 1898. Labour was perfectly normal, child was alive and mature. On the third day of the puerperium the temperature rose in the evening to 102·2°. On the evenings of the fourth and fifth days it was 102°, and on the sixth and seventh 104·2°

---

[1] **Read at a meeting of the Glasgow Obstetrical and Gynæcological Society held on 31st May, 1899.**

and 104° respectively. With the rise of temperature there was a corresponding increase in the pulse-rate. Examination of the abdomen revealed nothing abnormal, and there was no tenderness or complaint of pain. The lochia were slightly fœtid, the bowels were loose.

Pure cultures of the bacillus coli communis were obtained from the secretion taken from the cervix. The patient was treated by intra-uterine douching of $HgCl_2$ (1 in 3,000) morning and evening for two days, then daily douching with a weaker solution, until the temperature returned to the normal. She had also 3 grs. of quin. sulph. every four hours on the sixth and seventh days, and cold sponging twice or thrice daily. By the ninth day the temperature was normal both in the morning and evening. It continued so until she left the hospital.

CASE II.—A. B., primipara, was delivered by her medical attendant on 8th April. Case was one of placenta prævia marginalis. The child presented by the breech. The patient had lost a large quantity of blood before the doctor arrived. Chloroform was administered, a foot pulled down, and child extracted. Perineum was torn up to rectum, but not into it.

On third day temperature was 100°; some portions of membrane were expelled. On following three days vagina was douched with $HgCl_2$. Temperature ranged about 102°.

On fifth day doctor called me in consultation. Temperature then 103°, pulse very rapid. Tongue coated. No tenderness in abdomen. From secretion taken from the cervix pure culture of bacillus coli were obtained. I recommended douching out uterus morning and evening and the administration of quinine and stimulants. This was carried out for several days, and patient seemed to improve, but temperature never fell much below 102°, and was sometimes as high as 104°.

On tenth day I saw the patient with her doctor. She was then in a very pronounced typhoid condition. This, the doctor said, had been gradually coming on during the two previous days. The temperature was 104°. There had been pretty sharp diarrhœa for nearly a week, but it had always been easily controlled by bismuth and opium. I considered the patient's condition quite hopeless. She died about twelve hours after our visit.

You will obtain some idea of the variety of organisms found in the uterine discharges in cases of febrile disturbances in the puerperium from a paper by Williams, in the September number of the *American Journal of Obstetrics* for 1898. In 40 cases, Williams found streptococci in 8, staphylococci in 2, colon bacillus in 6, diphtheria bacillus in 1, typhoid bacillus in 1, bacillus ærogenes capsulatus in 1, anaërobic bacteria in 9, gonococci in 2. Such results completely upset the views of a year or two ago, and which are too generally still held, that streptococci alone are worthy of mention as the infective agents in puerperal septicæmia. As an example of the latter erroneous view, I quote from a paper by Bulloch,[1] written in 1896—"As a rule, however, puerperal fever is a pyogenic process caused by the streptococcus pyogenes only, and would therefore be better named 'puerperal streptomycosis.'"

As regards the frequency with which the bacillus coli is met, it is difficult to speak very decidedly. The only two cases of puerperal septicæmia I have had to deal with in the past six months have been caused by that organism. They are the cases I have reported. In 75 cases of fever in the puerperium, collected from the literature on the subject, the bacillus coli was found 14 times, that is in 18 per cent. In these cases, in 8 per cent the infection was a pure and in 10 per cent a mixed one, sometimes with streptococci and sometimes with staphylococci, &c. One cannot be surprised that the bacillus coli is so frequently found, considering how near the rectum is to the vagina. In many of the reported cases there have been extensive lacerations of the perineum, and so it would appear that such accidents, as one would expect, distinctly favour the occurrence of infection by this organism.

By most authorities, infection by the bacillus coli is considered less grave than that by streptococci. Too much weight, however, must not be given to this view, as there have been so many fatal cases of infection by the former. A "mixed" infection, especially one with streptococci, seems often very virulent. This has been remarked on by several observers, Haultain[2] and Marmorek[3] amongst others. Here, I think, we have an illustration of the value of bacteriological examination of discharges and of the blood in septic conditions, for it would appear that, as our knowledge increases, from such examination greater certainty will be given to our prognosis. How it may affect our treatment it is impossible even to guess—at present, I fear, we must all admit that the treatment by serum is, to say the least of it, a little disappointing.

---

[1] "The *Rôle* of the Streptococcus Pyogenes in Human Pathology," *Lancet*, 1896, p. 984.

[2] "On the Culture, Diagnosis and Serum Treatment of Puerperal Infection," *Edinburgh Medical Journal*, 1897, p. 132.

[3] "Le Streptocoque et le Sérum Antistreptococque," *Annales de l'Institut Pasteur*, 1895, p. 619.

As regards the course of the disease when the bacillus coli is the infecting organism, there is not very much that is characteristic. It is slow, as a rule, and such symptoms as pain and tenderness of the abdomen are usually absent. Great fœtor of the lochia and diarrhœa should always arouse suspicion. The diagnosis can only be made with certainty, however, by a bacteriological examination.

MISSED LABOUR.[1]

BY WILLIAM M'FARLANE, M.B., C.M.

THE short notes which I have now the favour of reading to you relate to the successive occurrence in the same patient of missed labour, with the subsequent discharge each time *per vaginam* of a disintegrated fœtus. The term missed labour was applied by Oldham to those cases in which, the uterine expulsive efforts having been ineffectually made at full term, without other result than the escape of the waters, the uterine contractions finally subsided, leaving the fœtus *in utero.* The possibility of its occurrence has been the subject of much discussion, the general conclusion apparently being to admit that it may happen on rare occasions. Dr. Lusk, in his text-book on the *Science and Art of Midwifery,* 1896 edition, pp. 305, 306, relates the particulars of a case published by Barnes in the *Obstetrical Transactions,* vol. xxiii, p. 81, which, in his opinion, affords strong affirmative evidence of the possibility of the prolonged retention of a fœtus dying before the end of gestation. The late Dr. Matthews Duncan relates in his *Clinical Lectures on the Diseases of Women,* p. 21, a remarkable case of missed labour which occurred in his private practice. Norris and Dickinson in their text-book say—"A child at full term may die, and may remain *in utero* for weeks or for months afterwards." They also say—"With fair propriety it may be said that most of these cases are those of advanced extra-uterine fœtation of the intramural

---

[1] Read at a meeting of the Glasgow Obstetrical and Gynæcological Society.

(interstitial) or tubal variety, or of retention of the fœtus in a bilobed uterus." Professor Leishman, in his *System of Midwifery*, says—"An extremely rare and curious phenomena has been occasionally observed, in which the fœtus remaining *in utero*, labour does not come on at the usual time; and the remains of the fœtus may be retained for a considerable period, or discharged piecemeal by the vagina without, for a time at least, seriously affecting the health of the mother. This has been called missed labour, and is alluded to by Dr. Tyler Smith in his admirable manual, in which he gives the history and illustrations of a case which occurred in the experience of Dr. Oldham." It is only the extreme rarity of such cases that induces me to give a few particulars of the case.

Mrs. A., is now (May, 1899) 50 years of age, very stout, and has a pendulous abdomen which measures 50½ inches in circumference at the umbilicus. She has had eleven children; the first six were born living, and the last five still-born. The last child that was born lived only one day. Her first still-born child was born, she says, at the natural term.

The first time I was called to attend Mrs. A. was her eighth confinement, on the 12th November, 1884, and on inquiry found that she was in labour, and had been attended by a midwife. Mrs. A. had not menstruated for ten calendar months, and had not felt life for nearly a month. I managed to examine her with difficulty, as, being so stout, the parts were very much contracted. There was extreme anteversion of the uterus, and the abdomen was pendulous. I found, on examination, that the bones of the head were separate and loose inside the scalp, and though I was able to extract them with my fingers, I had to be careful not to cut myself nor the patient, as their edges were sharp. After the loose bones were extracted I managed to pull the body down. The body, which was above the average in size, was very much decomposed, the skin peeling off, the tissues soft and in a more or less putrid state. After delivery she was very ill for a time, but ultimately made a good recovery.

Again, in May, 1888, I was asked to attend Mrs. A., and on inquiry found that she was two months past her time of delivery, not having menstruated for eleven months. She stated that at the end of nine months she got a little less in size, and had slight pains of a bearing down character. She also complained of a cold feeling, with shivering. She said that she had not felt life for nearly six weeks. There were no strong pains till ergot was administered. The bones of the head came away separately, as at her previous delivery, and the body, when delivered, was seen to be that of a large baby very much decomposed.

Again, in January, 1891, I was called to visit Mrs. A., and on inquiry found that she was two months past her time of delivery, and that she had not felt life for about six weeks. On asking her why she had not sent earlier, she stated that she knew nobody could do her any good. The body, when delivered, was very much decomposed.

The last time I was called to visit Mrs. A. was in March, 1893, and found on inquiry that she was two weeks past her natural term, and had not felt life for about two weeks. The baby, when delivered, was decomposed, as her previous still-births had been.

The above facts were noted for my own use, but, on consideration, I thought they might interest the Society, and might give those who had attended a similar case an opportunity of stating their experience.

I will give short notes of another case of missed labour.

Mrs. B., who is now 45 years of age, 13 stones in weight, 50½ inches in circumference at the umbilicus in the recumbent position before her confinement, the mother of nine children, all being born living with the exception of the third, who was a large boy and died during birth. The youngest child was born four years ago.

I was consulted by Mrs. B. on the 25th May, 1899. She informed me that she was a considerable time past her time of delivery, her last period being the 15th July, 1898, and that she had not felt her baby move for about three weeks. She said that about three weeks ago her breasts got a little larger, and that milk appeared in them, and when speaking to me she pressed them and milk flowed out freely. She also said that at that time she got a little less in size, and felt nervous, chilly, and feverish. Mrs. B. consulted the midwife that was to attend her, complaining about being past her time, and she replied that labour would come on all right.

When I examined her there was anteversion of the uterus, and the abdomen was pendulous, and on auscultation there was no sign of life; everything confirmed the history she gave me that the child was dead.

On 26th May I was asked to visit her. I managed to examine her with difficulty, as, being very stout, the parts were very much contracted; the os uteri was rigid and closed.

I tried to dilate os uteri, and after a time managed to dilate it a little, and felt a soft body coming down. She was put on an ergot mixture on 25th May; this was continued, and a bandage applied.

I again saw her on 31st May, when a photograph was taken to show the pendulous state of the abdomen.

About 9·30 P.M. on the evening of 1st June I was asked to attend Mrs. B., as she was in labour. When I arrived she was taking strong pains, and very shortly after my arrival the membranes burst, and a large quantity of water and a reddish, smelling fluid escaped; the pains abated a little, but very shortly they were strong again, and immediately afterwards a membranous sac appeared, which was the scalp separate from the bones; and the head followed in a collapsed state: the frontal bones were flat and the other bones of the head were loose; the tissues of the body were soft and the skin peeling off. Immediately after the baby was born I sent for a medical friend to come and see it, as I had been telling some of my medical friends what I expected would take place, and he is thus able to confirm the above facts.

I think these facts show that she carried the baby a considerable time beyond the natural term, her last period being 15th July, 1898, and she was always very regular. She was thus about six weeks past her natural term, and about four weeks that she did not feel life.

The case differs from Oldham's case in that at full time the pains only amounted to a feeling of uneasiness, and there was no discharge of the waters, as the waters came away when I was present. There is room for a good deal of scepticism on this subject, but I have recorded the facts as faithfully as I could. I saw her on 5th June. She is remarkably well, good appetite, and free from pain: the breasts remain the same as they have been for the last month.

Prolonged Pregnancy.—The next case that I have to bring before you is one of prolonged pregnancy. Prolonged pregnancy has also been the subject of much discussion. It has great interest from a medico-legal point of view, and also as to the causation of labour. Some writers deny that pregnancy can be prolonged beyond a stated period. Reid says—"There is no full or satisfactory evidence of gestation having been prolonged beyond 293 days." Again, Meigs "considers that gestation may be continued to twelve months." I think, from the observations on animals and from recorded cases, that pregnancy may be prolonged beyond 293 days, or any limited period. I will now give a few particulars of the case.

I was asked at 2 A.M. on the morning of 29th March, 1898, to assist a medical man at a difficult labour. On arriving I found an anencephalic head born, but the shoulders could not be delivered. I made strong traction with the aid of the doctor pressing over the uterus, and thus managed to get the shoulders born. When born it was seen to be a very large anencephalic baby only newly dead. I found that Mrs. S. had had an abortion, at the third month, on 5th February, 1897. The fœtus and placenta came away all right. She menstruated on the March following and on 29th April, 1897. From 3rd May, the last day of her period, till the baby was born on 29th March, 1898, there was never any discharge. She states positively that the last day of her period was 3rd May, and that she felt life in the September following, and continued all the time to feel plenty of movement as of a lively child. The mother seems very intelligent, and does not waver in any of her statements. She said that she would have called her medical man sooner, but, feeling plenty of life, she thought there was no danger. Some of her neighbours who began to be pregnant at the same time, and some later, were all delivered at full term before her. She felt very great distress the last six weeks she carried the child, her back being painful at the end of nine months; after that the uneasiness changed to the front. The last two months she could not sleep at night owing to the oppression and want of breath. Her friends had also to assist her in the morning, because she felt so helpless and exhausted. She did not complain of any swelling of the feet; if any, it was very slight. She never had any serious illness, always being in good health.

It is rather difficult to find an explanation of the above case; whether she missed one period, and then became pregnant before her next period, or to admit that she became pregnant immediately after 3rd May, and thus a real case of prolonged pregnancy.

Mrs. S. was again delivered on 14th April, 1899, at 4 P.M., of a boy. Mrs. S.'s last period was on 27th June, 1898, therefore, upon this occasion, she would be about ten days past her natural term. She is of a stout make, and of medium height. The pelvis is small, being of the generally contracted type. I was called to see Mrs. S. on the night of 13th April, at 10 P.M., then during the night, and next day till 4 P.M., when I applied the axis traction forceps. The os uteri was not fully dilated, but the parts were soft, and the head was beginning to mould into the true pelvis. On traction, the head came down rapidly, and a boy, weighing 8½ lb., was born living. Mother and child made a good recovery.

I give these few particulars of Mrs. S.'s confinement in April, 1899, to show that she has a tendency to pass the usual duration of pregnancy. I have no doubt you have all had similar cases to this one. I applied the forceps before the cervix was fully dilated, because of the length of time she was in labour, and owing to the contraction of the pelvis.

APPENDICITIS.

BY JOHN O'CONOR, M.A., M.D., T.C.D.,
Senior Medical Officer, British Hospital, Buenos Ayres.

MY object in writing this paper is to suggest some simplification of the meaning of the term appendicitis, and to invite attention to the expediency of adopting a more uniform treatment.

Irrespective of the direct causative factor, be it a special microbe, an irritated bacillus coli, toxin, or foreign body, &c., there are few, I think, who will not readily admit that appendicitis is a local infective malady, which constantly disintegrates the appendix, and by perforation of the same, not unfrequently destroys the life of the individual; and that this apparently functionless organ is particularly prone to disease, owing to its peculiar anatomical formation and situation.

From a personal experience of sixty operations for appendicitis, I do not place much value on a classification such as catarrhal, suppurative, gangrenous, &c., for I have frequently noted that such distinctions are practically worthless; to say the most, they only imply mere phases of the same disease, sometimes existing and evident, more often existing and non-evident. I think it would better serve all purposes if we should adopt a common working basis, and adhere to the simple yet comprehensive term appendicitis. By so doing, I feel certain we might often avoid useless theorising on a complaint whose transition stages are so direfully insidious.

I should think there are few medical men, who if called into consultation in a case of appendicitis, and finding the patient suffering from a "drum" abdomen, vomiting, pulse 140, and hippocratic face, would not sum up the situation as perforation with diffuse peritonitis, or if they met with a circumscribed, tense, painful, fluctuating swelling in the cæcal region would not diagnose appendical abscess.

Now, suppose we put aside these two self-evident, and I may say late, phases of the disease, I ask is there a physician or surgeon to be found who at a bedside can correctly diagnose or picture the exact pathological lesion in a case of appendicitis? (1) Is it possible to include or exclude the existence of a rapidly thinning stricture? (2) Can early abscess-formation between adhering coils of bowel be diagnosed? (3) Can it be positively stated that the appendix is only congested, distended with mucus, blown out with pus, or that it is not rapidly becoming gangrenous, or that protective adhesions are forming, and that there is not some foreign body or mucous mass on the point of bursting into the abdomen?

My experience teaches me that I am not competent to decide these points without the introduction of the senses of sight and touch. And as I consider that each one of these questions should be promptly decided for the patient's welfare, I unhesitatingly recommend and practise immediate cœliotomy. By this simple procedure I find I can eliminate all element of doubt, and effect a rapid cure by extirpating both organ and disease at the same time.

Doubtless many will say, why open up every case when a large percentage undergo spontaneous cure? My reply to such a question would be: (1) I am unable to say at the commencement of any case that the patient will recover without operation; (2) I cannot guarantee that some sudden emergency might not at any time arise which would render operation useless; (3) cœliotomy and removal of appendix, pus, &c., is the most exact and rapid method of cure with which I am acquainted, and (4) I do not believe in a large number of spontaneous cures.

An appendix once infected is a permanent weak spot, and although in many cases no actual recurrence takes place, yet in a considerable proportion adhesions have formed around appendix and cæcum which cause chronic digestive disturbance, with dragging pain, and some tenderness in the right iliac fossa. The appendix frequently after an attack becomes glued to adjoining structures; on two occasions I found it adherent to the right ovary, in each instance causing chronic ovarian irritation. And in some cases I found it firmly adherent in the pelvis, tying down the cæcum in a tent-rope fashion; in such cases the patients had complained of flatulence, pain and tenderness for a long period. I find when I remove these adhesions or tent-rope appendix that immediate and permanent relief follows.

Another condition which I have observed, is the influence in some cases of an abnormally short meso-appendix on the movement and shape of the appendix. On three occasions (without a previous history of appendicitis) I operated purposely to relieve a continuous dragging pain in the cæcal region with tenderness at M'Burney's point, without any other local or general symptom, and found the appendix firmly bound down behind the cæcum by a stunted thickened meso-appendix, with kinking and a tendency to stricture at the point of distal attachment of mesentery to appendix; it was impossible to raise the cæcum, much less the appendix, to the surface until the meso-appendix was divided, whereupon both could with facility be lifted out of the wound. I cannot imagine a more dangerous condition in case of the supervention of an attack of appendicitis, for I should think that gangrene and perforation would rapidly take place under such circumstances. I may mention that the three patients permanently recovered.

There is another point in connection with this disease which requires further definition. Some time ago an article written by Mr. Pearce Gould appeared in one of the London medical papers, in which a series of cases of appendicitis with "general peritonitis" were reported, many of which were cured. I have no doubt that Mr. Gould's appreciation of the term "general peritonitis" considerably differs from mine, for although cures were reported I failed to satisfy myself that a single case of "general peritonitis" recovered. Personally I do not understand the application of the word "general" to a limited contiguous peritonitis starting from an infected appendix, and I take it that the usual meaning of "general peritonitis" is a diffuse peritonitis such as is caused by the unrestricted escape of fæcal matter into the general abdominal cavity.

In all cases of appendicitis there is some peritonitis which may be confined to the serous covering of the appendix, or may spread by direct contiguity over a few coils of adjoining bowel; but surely such extension does not imply general peritoneal infection.

I have operated on twenty cases where the adjacent coil or coils of bowel were inflamed (fried-ham appearance), by removing the appendix and any existing pus—an uninterrupted recovery followed in each—yet I never flattered myself that I had cured "general" peritonitis.

In my sixty cases there have been four deaths, one due to pyelo-phlebitis in a case of long standing (fourth attack lasting for one month before admission to hospital), and three to diffuse peritonitis caused by an ante-operative perforation; no adhesions having formed, the fæcal matter flowed freely into the abdomen. So far I have never saved a case of general peritoneal infection, and I seriously doubt if I ever shall.

I think the qualification "general" might be profitably dispensed with, and the term localised peritonitis might be used for inflammation of the serous membrane spreading by direct contiguity from an infected focus with formation of adhesions, and diffuse peritonitis for general peritoneal infection such as may be caused by ruptured bowel, &c., without the formation of efficient protective adhesions.

In conclusion, the method which I now adopt and find most satisfactory in appendicitis is to operate as soon as possible after I diagnose the complaint. The local skin-disinfection having been carried out very gently, M'Burney's cœliotomy is performed: if any tumefaction is previously felt, the incision is made directly over it. If any pus is present it is removed with sponges, and when the parts are thoroughly dried a deliberate search is made for the appendix, separating adhesions if necessary until it is found. I made it a rule some years ago never to quit the abdomen, when operating for appendicitis, without taking the appendix with me.

On two occasions I proved the value of my rule, for I discovered a second collection of pus when hunting for the appendix, which undoubtedly would have been left behind if I had followed the teaching of some conservative surgeons. I have over and over again broken down intestinal adhesions in the face of pus cavities, and have never yet caused fresh infection, which I attribute to the fact that I always endeavour to let the light into a pus collection, and clean up before proceeding further.

In my opinion, there is far more danger in leaving a rotten appendix behind than in clearing out existing pus, separating adhesions, and removing the organ. In all cases of appendicitis, when suppuration is met with, I place a large drain on the stump of the appendix, and take care to give free vent to anything which may require to come out.

The treatment of appendicitis by applying poultices or ice, and the administration of opium or purges, and hoping for spontaneous recovery, or fixing some arbitrary time for operation, is neither more nor less than a medical farce which is never amusing, but frequently disastrous.

CURRENT TOPICS.

GLASGOW CORPORATION—HEALTH DEPARTMENT.

THE report of the Medical Officer of Health for the year 1898 contains much matter which, to those who take any interest in the public health, and therefore to all right-minded citizens, must prove not only attractive but also very important.

For a considerable number of years past the death-rate of Glasgow, in common with that of the country generally, has been falling, and the present decade has witnessed the lowest yearly rates recorded since registration began. If the seven years 1891-97 be compared with the year 1898, the report shows that 1,154 lives were saved in 1898, which, if the older rate had persisted, would have been lost. This gain is not distributed over all classes of disease, but is the net result of gain in some and loss in others. The most striking gain is in connection with pulmonary diseases. With regard to phthisis, the gain is great, but with regard to acute diseases (pneumonia, bronchitis, and pleurisy), it is more than three times as great. The principal losses are in respect of enteric and diarrhœal diseases. It is earnestly to be hoped that we shall soon see in the case of a preventable disease like enteric a decline as unmistakable as that with which we have long been familiar in the death-rate from phthisis.

Dr. Chalmers, in suggesting an explanation for the increased prevalence of enteric and diarrhœal diseases, remarks that where the surface is grossly fouled and the air much polluted in the neighbourhood of dwellings, infantile diarrhœa tends to be constant, and the conditions that favour a chronic prevalence of diarrhœa favour the continuance of enteric fever. Dr. Chalmers accordingly directs the attention of his committees to two practical points: (1) The misuse of the water-closets, which in recent years have replaced many of the old ashpits, is apt to lead to fouling of stairs and landings and choking of drains; (2) there is some ground for thinking that the altered manner of cleansing back-courts, which frequently follows the introduction of water-closets, is not so efficient as hosing.

The Medical Officer of Health estimates the population of Glasgow as 731,675 in the middle of 1898—a figure based on the number of inhabited houses. The Registrar-General, basing his estimate on the rate of increase during the intercensal period 1881-91, puts the figure at 724,349. The increase in the one case is 10·1 and in the other 11·2 per cent on the census population of 1891. In the six years from the middle of 1892 to the middle of 1898, the births registered exceeded the deaths registered by 48,958, which represents an increase of 7·3 per cent on the population of 1892. In addition to this, 1 per cent of increase on the Registrar-General's estimate, but 2·3 per cent on the Medical Officer's, remains to be accounted for by immigration.

As might be expected, some districts show an increase and others a decrease of population since 1891. The density of population has increased from 55·5 persons per acre in 1891, to 59·4 in 1898. It varies in different districts from 4 (Pollokshields West, Bellahouston) to 338 (Brownfield).

The number of marriages registered in 1898 was 7,108, or 9·81 per 1,000 living. This rate must, of course, be doubled to indicate the number of persons who were married. It is higher than for any year since 1883, and the average rate for the three years 1896-98 has not been reached in any similar period since the decade 1871-80. We may probably look upon a high marriage-rate as being to a large extent an index of commercial prosperity, and as being in itself altogether satisfactory.

The births registered in 1898 numbered 24,258, a rate of 33·154 per 1,000 living. For different periods the rate has been as follows:—

Five years 1886-90, .	35·5 per 1,000.	
,, 1891-95, .	33·9 ,,	
1896, . . .	34·1	average, 33·6 per 1,000.
1897, . . .	33·4	
1898, . . .	33·2	

In 1898 Kelvinside was the district with the lowest birth-rate, viz., 10·84, and Bridgegate and Wynds had the highest, viz., 46 per 1,000 living.

The deaths of citizens numbered 14,872, a rate, on the Registrar-General's estimate of 20·5, and on the Medical Officer's of 20·3 per 1,000 living.

As has been already mentioned, the lowest recorded death-rates in Glasgow have been observed in the present decade. The rate for 1898 is lower than that for 1897, that for 1896 was still lower, and for 1894 lower again. A vast improvement is shown by Bridgegate and Wynds district in consequence of recent extensive reconstructions, and the replacement of the old by a better class of inhabitants. The death-rate fell from

43·68 in 1891-92 to 35·55 in 1893-94,·31·33 in 1895-96, and 30·97 in 1897-98. Curiously enough, the birth-rate in the same district rose from 36·39 in 1891-97 to 46 in 1898. On the other hand, Port-Dundas is pointed out as a district which, relatively speaking, is going from bad to worse.

A declining birth-rate seems to be a characteristic feature of modern civilisation, and is a matter for earnest consideration by all who take an interest in national health and wealth. Within certain limits, and provided that the death-rate falls in a corresponding degree, it may be regarded as altogether good. But it is of the utmost importance for the survival and vigorous health of a nation that its population should steadily increase, so that it may maintain and extend its influence, promote its civilisation, and more than hold its own in the struggle and rivalry of international life. If the fall in the birth-rate and the fall in the death-rate as presently observed in civilised countries were both to be continued indefinitely, the logical consequence would be nations consisting of old men and old women—not a very satisfactory state of matters. We have the well-known case of one great European people which, in virtue of a thoroughly national impulse, has for some time past laid itself under sentence of extinction by reduction of its birth-rate, and there can be no doubt that similar causes are operative, though in much less degree, among ourselves. It is customary to censure the lower classes of the community for their extravagant fertility, but the very individuals whose circumstances best fit them for rearing children are, in great measure, those who offend against the State in refusing this duty. Are we to regard the latter as victims of blind submissiveness to a decree of nature, that only through struggle and rivalry, individual, national, and international, can social evolution attain its highest development?

The infantile mortality is another important question. In 1898, 3,792 children died in Glasgow under 1 year of age—a death-rate of 156 per 1,000 births, and a figure which, from the economist's point of view, means a great waste of vital energy on the part of child-bearing women, and of wealth on the part of those who support them. Unfortunately the infant mortality is tending upwards, though Glasgow compares favourably with other large towns of Britain, with the exception of Edinburgh. In the different districts of Glasgow this rate (deaths under 1 year per 1,000 births) varied from 86 for Crosshill, to 227 for Bridgegate and Wynds in 1898, and from 57 for Hillhead, to 232 for Bridgegate and Wynds for the years 1891-97.

From the principal zymotic diseases the mortality in 1898 corresponded to a death-rate of 3·448 per 1,000 living. Thirty-six cases of typhus were notified during the year, and six deaths occurred from this disease. The mortality from enteric alone corresponded to a death-rate of 0·308 per 1,000 living, and, as already mentioned, ground has been lost instead of gained in respect of this disease. It is suggested that local rather than epidemic influences have had to do with this increase. The death-rate from diarrhœal diseases is also unfortunately increasing, the increase being mainly due to the greater mortality among children. Scarlet fever shows a diminution both in the death-rate per 1,000 living and in the case mortality; the latter in 1898 was 5·2 per cent. From diphtheria and membranous croup, the mortality per 1,000 living has shown a marked decrease in recent years. The death-rate from phthisis may be shown thus:—

Five years 1886-90,	2·507 per 1,000
„ 1891-95,	2·273 „
1896,	1·903 „
1897,	1·985 „
1898.	1·938 „

Under the Glasgow Police (Amendment) Act, 1890, 62 houses were closed during 1898, a considerable number of them on the ground of extreme structural disrepair. 606 houses have now been closed since the Act came into operation.

"On one occasion advantage was taken of the powers conferred, by Section 36 of the Act, on ten ratepayers to make representation to the Local Authority concerning the offensiveness of any business carried on within the district, and the complaint was remitted to the medical officer for report. The case was an excellent illustration of the value of bye-laws for regulating the conduct of such businesses, and on a representation being made to the manufacturer the cause of complaint ceased."

Two hundred and fifty-one dogs were reported by the police during 1898 as having bitten persons. An inquiry was made in each case with a view to ascertain whether there was any evidence that the animal had suffered from rabies, but in each instance the result was negative.

Among the tables in the appendix to the report we find one which shows, along with other things, that the percentage of uncertified deaths is 2·9—uncertified deaths under 5 years 3·8, above 5 years 2·2. Among legitimate children 4·9 per cent of the deaths under 1 year were uncertified, and 1·3 per cent of the deaths between 1 and 5 years. Among illegitimate children the corresponding figures were 8·4 and 4·9 respectively. The illegitimate births were 6·1 per cent of the total, the percentage varying from 1·4 in Pollokshields West and Bellahouston, and 2·0 in Langside and Mount Florida, to 18·0 in St. Enoch Square, and 18·7 in Bridgegate and Wynds. Other tables give the deaths in friendly societies, the insurance of lives in friendly societies, and the insurance of legitimate and illegitimate children. Another table shows the temperature and rainfall. The last table shows the number, average residence and cost of treatment, and various other data concerning the patients in the city fever and small-pox hospitals. The average daily cost per patient is 2s. 7d. (interest on capital expenditure not included). About £40,000 per annum is the ordinary expenditure on the hospitals. The city of Glasgow may still congratulate itself that the character and management of its fever hospitals are worthy of the reputation of its health department.

GLASGOW CORPORATION—SANITARY DEPARTMENT.

THE twenty-ninth annual report on the operations of the Sanitary Department is a record of good work accomplished, and possesses an interest which is much more than purely official. Some of the figures give an idea of the large scale on which the agencies connected with the department operate. Thus, under the item of disinfection, 10,840 fumigations with sulphurous acid were carried out. Mr. Fyfe thinks that formalin may prove to be a better disinfectant, but he cannot yet quote experimental results from his own department to corroborate this view.

Of the 29,559 nuisances discovered in the course of the year, most were due to drains and plumber work being choked, defective or in bad repair; to a filthy state of external walls of dwellings, stairs, lobbies, or closets; to sinks, water-closets, or traps connected with such being broken, choked or out of repair, or to a filthy state of internal walls, floors, &c. Remark is made on the still inadequate latrine accommodation for the humbler classes of the community. In back lands especially, little progress is being made in the direction of substituting water-closets for the offensive pan-privies.

In connection with the reconstruction of some of the lower parts of the city, and the closing of uninhabitable houses, the rents of the smaller dwellings that survive naturally rise. For the whole city, the average cubic space of one-apartment houses is 1,323 feet, with a monthly rent (including stair-gas and water) of 8s. 2¼d., or at the rate of 6s. 3¾d. per 1,000 cubic feet. For two-apartment houses, the corresponding figures are 1,848 feet and 10s. 10d., or a rate of 5s. 10½d. per 1,000 cubic feet. So that, as Mr. Fyfe remarks, the tenant of the one-apartment house, taking the whole city, pays 5¼d. more per month for 1,000 cubic feet than the two-apartment tenant, or nearly 7½ per cent more than his neighbour, and loses besides the possibility of privacy.

The night inspectors made 50,910 inspections by night in the ticketed houses, and detected 5,089 cases of overcrowding. A remarkable case is narrated, which occurred at Millroad Street, and may be quoted here to show the length to which overcrowding will go. The incident occurred in a small single-apartment house, two stairs up, ticketed for *two* adults, and containing 880 cubic feet of air-space. "Usually the night inspectors are well watched during their perambulations, and the warning signals of their approach are quickly passed from door to door and from close to close by the pickets of the overcrowder. In this instance, however, the inspectors had got upstairs, and were at the door before any exit by that means could be made. The overcrowder is not easily daunted. While the limbs of the law stood at the door, six of the *ten* inmates had made off through the window, crawled along the ridge of the adjoining building, and finally squatted themselves behind a chimney stalk, well away from the house and hidden by the slope of the roof. They were followed by the inspectors, and brought back to supply the necessary evidence for the case."

The report gives some information on the subject of farmed-out houses, which are found chiefly in the Central district, and consist mainly of one, two, or three-roomed apartments. There are instances, however (one each), of such houses having four, five, six, seven, and nine apartments, the lodgers in each of those numbering from 67½ (four rooms) to 91½ (six rooms). In those large houses "there are large apartments, and the manner of occupancy of those by both sexes, as it proceeds at present, is a standing disgrace. The wording of an official report is not able to express the shame of it."

The common lodging-houses of the smaller kind are diminishing in number, there being now 79 on the register—60 for males and 19 for females. The class who resort to such places appear to prefer the larger institutions, which are better fitted up and offer greater comfort for the same price.

Some important details are given as to the city restaurants, which, including tea-rooms, number 477, and have accommodation for from 20 to 500 persons each, the total sitting accommodation for the public amounting to 24,118 (this does not include hotels or taverns). The condition of the kitchens in these places was not always found to be satisfactory. Among the employees were 1,306 females of 18 years and upwards, and 162 females under 18. Of those above 18 years, 630 were employed thirteen or more hours daily. It is pitiful to note that of this number, 50 worked sixteen, other 18 worked seventeen, and one other worked eighteen hours a day.

In connection with the subject of food, we note that in the city knackeries, 1,127 horses were slaughtered for human food, as against 1,542 for purely commercial purposes. There must, therefore, be already a considerable demand in Glasgow for horse-flesh as food.

It is in accordance with the enlightened policy of the Corporation, as guardians of the public health, to offer every inducement to adults and children to spend a part of their leisure time in the open air. This is an important function of the public parks, with their fountains, flowers, and music, and of the cars, which secure so ready access to the suburbs. The open spaces, with their gymnasia for children, confer benefits of an allied nature. Eleven areas have now been acquired by the Open Spaces and Sanitary Offices Committee for the purpose of children's recreation. The total amount of ground which it has been proposed thus to utilise amounts to 33,614 square yards.

It is within the province of the Sanitary Department to exercise a certain supervision over the various cemeteries within the city. In some cases it has been found that one result of the operation of the bye-laws has been to enhance the price of lairs. "In one of the cemeteries, the superintendent informed the inspector that, in order to carry out the regulations, the directors had to raise the price of the common ground by 50 per cent, in order to recoup the company for the loss sustained by the restriction imposed, causing 1 foot of earth to be placed between the coffins, and 4 feet of earth above the last coffin. In another case, the cheapest lairs, which in 1892 cost £2, 2s., were raised in that year to £2, 12s. 6d. each." "The price has again been raised this year to £3, 3s. each."

It is not necessary to allude to all the topics that are dealt with in this report, or in the numerous statistical tables with which it is furnished, but we see here some of the results of a great and beneficent public enterprise steadily working away in our midst with a patient watchfulness over the health of the community, and of many thousands of individuals in the social aspect of their lives, such that the contemplation of what would happen if this enterprise suddenly came to a standstill may well give us pause.

GLASGOW ROYAL INFIRMARY.—Dr. John Wainman Findlay has been appointed extra Dispensary physician in room of Dr. J. B. M'Kenzie Anderson promoted to be Dispensary physician.

ROYAL HOSPITAL FOR SICK CHILDREN.—Dr. George Henry Edington has been appointed one of the extra honorary surgeons at the Dispensary.

GLASGOW MATERNITY HOSPITAL.—Dr. W. Edgar Macharg has been appointed in-door house surgeon, and Drs. John Wotherspoon and C. E. Fleming out-door house surgeons. Dr. Agnes F. Blackadder has been appointed out-door house surgeon at the West End Branch.

HONOUR TO DR. J. B. RUSSELL.—Dr. Russell has been awarded the Bisset-Hawkins medal by the Royal College of Physicians of London. The honour is in recognition of ten years' work in the advancement of science or of public health.

OPENING OF THE WINTER MEDICAL SESSION.—Thursday, 19th October, is the date on which the medical classes reopen at the University, Queen Margaret College, St. Mungo's College, and Anderson's College.

UNIVERSITY OF GLASGOW: PRACTICAL BACTERIOLOGY AND PATHOLOGICAL HISTOLOGY.—Courses in these two subjects for graduates and senior students of medicine will be conducted by Professor Muir and Dr. Ferguson in the Pathological Department of the Western Infirmary, beginning on Monday, 2nd October, 1899. The courses will extend over eight weeks, each class meeting thrice weekly. Fee for either course, £3, 3s.; or for both courses, £5, 5s. Further information may be obtained on application at the Pathological Institute, Western Infirmary.

BACTERIOLOGIST TO THE CORPORATION.—The subcommittee of the Health Committee have selected a short leet, consisting of four out of the sixteen candidates. It is expected that the subcommittee will meet on the 6th and the committee on the 11th inst. to decide upon the applicant to be recommended to the Corporation for the appointment.

ARMY MEDICAL DEPARTMENT.—The following is a list of the successful candidates for commissions in the Royal Army Medical Corps at the recent examination held in London (arranged in the order of merit):—L. W. Harrison, F. S. Irvine, H. M. Morton, M. H. Babington, F. G. Richards, E. B. Knox, H. T. Roch, F. Harvey, C. E. Trimble, J. Matthews, W. A. M'Loughlin, E. W. Siberry, B. F. Wingate, P. S. O'Reilly.

We publish the papers in medicine and pathology, and surgery:—

MEDICINE AND PATHOLOGY.

(PROFESSOR M'CALL ANDERSON, M.D.)

1. A man, æt. 36, had for some months been below par, and was losing flesh and colour, but continued at work until one day when he rapidly became comatose. On recovering consciousness, it was found that his right arm and leg were completely, while the lower segment of the face on the same side was partially, paralysed, and to every question he returned for answer either "yes" or "no." His heart was not sound, but there were no murmurs, and dropsy was absent. He had never had syphilis.

Fill in the picture of all the additional symptoms which might be present. Give the diagnosis in full, and what would you find *post-mortem* in the event of a fatal issue?

2. Give an account of the indirect (pressure) symptoms which may be encountered in cases of aneurism of the arch of the aorta.

3. Give a short sketch of the complications of diabetes mellitus.

4. How can you satisfy yourself (*a*) that pus is present in the urine, (*b*) that it comes from the pelvis of the kidney, and (*c*) how would you treat the condition?

SURGERY.

(SIR WILLIAM MAC CORMAC, BART., K.C.V.O.)

1. How is a dislocation backwards of the hip-joint produced? Give the diagnosis and treatment of the injury.

2. What are the different forms of cystic disease met with in the

female mamma? Give the pathology, symptoms, and treatment of each variety.

3. For what conditions may iridectomy be required? Describe the operation, and give the after-treatment of a case.

4. State fully the considerations which would influence your decision as to the treatment, either by amputation or by excision, of a case of tuberculous disease of the knee-joint in a young adult.

TANNOFORM (E. Merck, Darmstadt; Fredk. Boehm, 16 Jewry Street, London, E.C.) is described as a condensation product of tannin and formaldehyde, possessing the healing and astringent properties of the former, together with the disinfectant and antiseptic powers of the latter. It has recently been introduced as a specific for hyperidrosis and bromidrosis. It may also be used as an application for soft chancre, bedsores, itching piles, &c.

The drug occurs as a loose, reddish-white powder, insoluble in water, but soluble in alcohol, and in solution of ammonia or of sodium carbonate. It may be employed by itself, or mixed with starch, or as an ointment. The manufacturers supply it in substance, as a dusting powder, as an ointment, and in the form of either hard or soft soap.

Tannoform may also be administered internally as an intestinal disinfectant. It is insoluble in the gastric juice, but on reaching the intestine is split into its component parts.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1898-99.

MEETING XI (*continued*).—3RD MARCH, 1899.

The President, DR. G. S. MIDDLETON, *in the Chair.*

CASE OF PERNICIOUS ANÆMIA TREATED BY ARSENIC AND BONE-MARROW.

BY DR. M'CALL ANDERSON.

D. M'P., a policeman, aged 48, was admitted to the Western Infirmary on 21st January, 1899, complaining of weakness and shortness of breath of three months' duration. He stated that he had always previously been healthy, and his family history was good. His parents both died at the age of 68, he had four sisters and one brother alive and well, while one sister had died of "consumption" at the age of 19.

He was on night duty at the onset of his present illness, and in his rounds he had many stairs to climb. He noticed about three months ago that he became very breathless after a night's work, and often felt so faint that he had to sit down and rest upon the steps. His feet also sometimes swelled a little; but this may have been due to varicose veins, from which he suffered. He rapidly lost weight, and his friends noticed that he was very pale and jaundiced in appearance.

On his admission he was found to be somewhat emaciated and extremely anæmic. He became breathless upon exertion, but did not otherwise suffer from dyspnœa. His appetite remained good and his bowels regular. The lungs were healthy and the urine normal. There was slight enlargement of the liver. A loud venous hum was present on the left side of the neck; but no murmur. either hæmic or organic, was to be heard over the heart. He had been troubled with dimness of vision for a few days before entering the infirmary; but upon ophthalmoscopic examination the fundi were found to be normal, and there were no retinal hæmorrhages. His normal weight was 12 st. 7 lb. A month before admission it had fallen to 11 st., and on 21st January it was 10 st. 7½ lb. An examination of the blood made on the same day showed that the hæmoglobin had fallen to 25 per cent, and the red corpuscles to 1,500,000 per c.mm. The red corpuscles were found to vary in size, and many microcytes were met with, as well as dumb-bell and flask-shaped forms.

The patient was put upon bone-marrow, in doses of half an ounce thrice daily, and this was continued until the 16th of February, after which arsenic was given in gradually increasing doses. A progressive improvement was noted. There was a gain in weight from week to week, and on the 11th of March the weight was 12 st. The condition of the blood was also improved, the hæmoglobin on the 9th of March amounting to 58 per cent, and the corpuscles to 3,000,000 per c.mm. The patient left the infirmary practically well.

MEETING XII.—7TH APRIL, 1899.

The President, DR. G. S. MIDDLETON, *in the Chair.*

I.—ON THE RADICAL CURE OF MASTURBATION.

BY DR. CAMPBELL CLARK AND MR. H. E. CLARK.

Dr. Campbell Clark, in conjunction with Mr. H. E. Clark, read a paper on the above subject, which will be published in the *British Medical Journal.*

II.—DEMONSTRATION IN *X*-RAY RESEARCH.

BY DR. JOHN MACINTYRE.

Dr. Macintyre gave a demonstration of recent work in *x*-ray research, showing some experiments, lantern slides, and instruments.

MEETING XIII.—21ST APRIL, 1899.

The President, DR. G. S. MIDDLETON, *in the Chair.*

I.—PATIENT OPERATED UPON FOR CHRONIC BILATERAL PRE-PATELLAR BURSITIS.

II.—CHILD SUCCESSFULLY OPERATED ON FOR INFECTIVE THROMBOSIS OF THE LEFT SIGMOID SINUS FOLLOWING OTITIS MEDIA.

BY DR. ARCHIBALD YOUNG.

Dr. Young showed the patients, and read notes of the cases.

With regard to the second case, *Dr. Walker Downie* congratulated Dr. Young upon his good result. The symptoms, he thought, pointed to extra-cranial rather than intra-cranial disease, and under the circumstances Dr. Young had done the right operation. He often found it best in young children to leave the sinus alone, but, if it were to be opened, it should be opened freely.

Dr. Nicoll said that palpation was not reliable as a method of determining the condition of the sinus. All cases of septic mastoid disease should be operated upon as early as possible. Many only came under the surgeon's notice when there was a generalised pyæmia.

Dr. Edington, discussing the first case, said that in the dissecting-room he had frequently met with a small bursa in the situation of the lower one described. He asked if the upper bursa lay over the patella, or partly over the ligament.

Dr. Barlow thought that the lower bursa must have been below the ligament.

Dr. Young replied that the smaller bursa lay over the lower part of the part of the patellar ligament, while the upper extended to the upper margin of the patella.

III.—CASE OF INTESTINAL OBSTRUCTION—VOLVULUS AND INTERNAL HERNIA—SUCCESSFULLY OPERATED ON.

BY DR. RITCHIE THOMSON.

Dr. Thomson's paper will be found as an original article in our issue for August, 1899, at p. 119.

IV.—A CASE OF ABDOMINAL SECTION FOR ACUTE INTESTINAL OBSTRUCTION.

BY DR. THOMAS KAY.

Mrs. T., æt. 30, was first seen by me on Friday, 23rd December. About six hours previously she had been seized by a severe abdominal pain, followed almost immediately by sickness and vomiting. The bowels had moved the day previously, but since the onset of the pain there had been no movement of the bowels, and the patient was not conscious of having passed flatus. On examining the abdomen no distension could be observed, but the patient complained of pain on palpation to the right of the umbilicus.

I saw the patient again the following morning. During the first part of the night she had been fairly comfortable, but towards morning the pain and sickness had again set in. No fæces or flatus had been passed. A large enema of oil and water was administered, but only a few small pieces of fæces were evacuated. The patient had numerous enemata of oil and water during the day, administered in the genu-pectoral position, without any result. When I saw the patient again in the evening, she was still complaining of pain, and had occasional attacks of sickness, though not very severe. There was still pain on palpation over the right side of the abdomen, but only slight distension.

The patient remained in much the same condition during the night of Saturday, 24th December, thirty hours after the onset of her illness.

On the 25th vomiting was more severe, and distension of abdomen more distinct. Towards evening, forty-eight hours after onset of illness, the vomiting became stercoraceous. The patient was removed to a private nursing home, and I operated at once. I cut down in the middle line, and immediately the peritoneum was opened a coil of distended bowel presented. This had a dark, purplish colour. On following this upwards, I almost at once came upon the obstruction. When the abdominal wound had been slightly enlarged upwards, this was seen to be caused by a fibrous band stretching from mesentery to distal part of lumen of bowel; behind this band a knuckle of bowel was jammed. In trying to bring the parts nearer to the surface, the attachment to mesentery gave way. The collapsed bowel distal to the obstruction was at once seen filling out. I applied a ligature, and removed the other end of the fibrous band as close as possible to the bowel. The abdominal cavity was carefully examined to make sure there was no other obstruction, but none was discovered. Numerous hard enlarged glands could be felt in the mesentery. When the patient came out of chloroform she vomited a large quantity of stercoraceous material; afterwards there was no more sickness. Early next morning she passed flatus, and a few hours afterwards had a motion. She continued to make satisfactory progress, and left the home perfectly well at the end of four weeks.

A microscopical examination of the band revealed ordinary fibrous tissue.

V.—SEVERAL CASES OPERATED ON FOR SPINA BIFIDA, WHICH PRESENTED UNUSUAL FEATURES.

VI.—A CHILD—AND PHOTOGRAPHS OF A SECOND CASE—WITH NOTES OF A THIRD—WHERE THE LESION WAS ORIGINALLY DIAGNOSED AS SPINA BIFIDA, BUT IS PROBABLY CONNECTED WITH THE NEURENTERIC CANAL.

By Dr. J. H. Nicoll.

It is intended that particulars of these cases shall be embodied in the matter of a paper on the subject of "Spina

Bifida" in the forthcoming volume (vol. ii) of the *Glasgow Hospital Reports*, till the issue of which their publication is deferred.

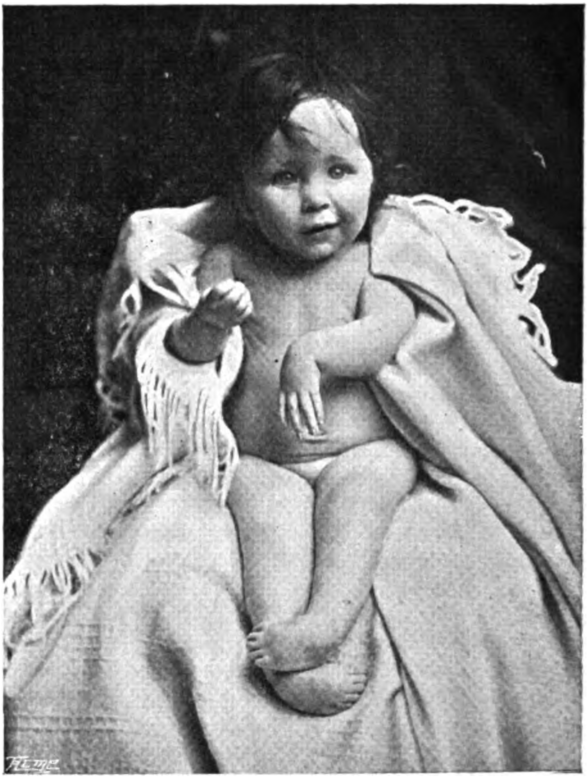


FIG. 1.

VII.—CASE OF DOUBLE CLUB FOOT WITH CLUB HAND, ILLUSTRATING THE REMEDIAL EFFECTS OF OPERATIVE TREATMENT.

BY DR. J. H. NICOLL.

B. A., æt. 15 months, sent to me at the Children's Hospital Dispensary in October, 1898, by Dr. J. Kennedy. Double tenotomy was done on both feet. This resulted, after repeated manipulations under chloroform and fixation in plaster of Paris, in partial reduction only of the deformity.

At the end of three months the condition of the feet was as shown in Fig. 1 (p. 200), which shows also the club hands, of which the left is the more marked, and a congenital facial paresis.

At that date I performed a double cuneiform tarsectomy,

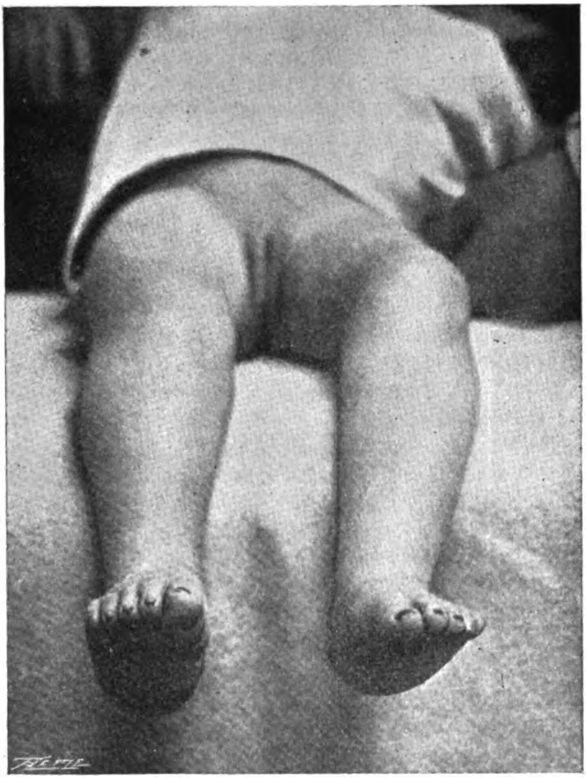


Fig. 2.

removing a wedge of bone from each foot, which consisted largely of cuboid and neck of astragalus. The result, three and a half months later, is as you see (Fig. 2, p. 201).

I have presented the case for two reasons. First, on account of the interesting combination of club hand with club foot; second, as having been treated throughout as an out-patient. I am in the habit of treating nearly all cases of tenotomy and tarsectomy in children as out-patients, and have done a number of these operations at the Children's Hospital out-patient department with uniformly good results, as regards aseptic healing. In the matter of the after-treatment, in such cases as require subsequent manipulation or application of talipes "boots" or plaster, these cases are in the same position as cases operated on as in-patients, which, ultimately, for the after-treatment, become out-patients.

VIII.—VESICAL CALCULI REMOVED BY LITHOTOMY FROM PROSTATIC PATIENTS, AGED 78, 80, AND 85 RESPECTIVELY.

By Dr. J. H. Nicoll.

These three cases operated on within the past three months are remarkable in one respect only—that of age. They were all ordinary cases of prostatic retention, with regular use of catheter, in whom cystitis or hæmaturia had recently developed owing to, or aggravated by, the growth of phosphatic calculi.

Mr. R., æt. 78, I saw in Saltcoats on 14th January in consultation with Dr. D. Campbell. He was then a "catheter prostatic" of two years' standing, and had been suffering for three days with continuous serious hæmaturia. He was brought to the St. Elizabeth Nursing Home in Glasgow, and the following day I removed, by the suprapubic operation, this sharp phosphatic stone. He made an excellent recovery, and is now going about again free from hæmorrhage. Whether the operation is to have any effect in reducing the size of the enlarged prostate remains to be seen.

Mr. M., æt. 80, I saw in consultation with Dr. A. Tindal on 3rd January. He had been a "catheter prostatic" for four years, with recurrent attacks of hæmaturia, and had for several months suffered in addition from great vesical irritability and an exceedingly fœtid condition of urine, which Dr. Tindal had been able partially to relieve by washing out the bladder daily. He was removed to the Queen's Park Nursing Home, and I removed this phosphatic stone by the median perineal operation, inserting a large perineal tube for drainage. The patient died from exhaustion three weeks later.

Mr. A., æt. 85, I saw in consultation with Dr. Stark on 16th March. He was then a "catheter prostatic" of over six years, and had for some days suffered from constant straining and desire to pass water. He was taken to Miss Baker's

Nursing Home, and I removed this phosphatic calculus by the suprapubic operation. He is now going about again in much increased comfort, though, as in the case of Mr. R., it is too early as yet to tell what effect the operation is to have on the prostatic enlargement.

Cystitic irritation and hæmaturia are frequently developed in prostatic cases apart from calculus formation. Cystoscopic examination and sounding are of less use in such cases than in many other classes of vesical ailments. In many cases the cystoscope or sound cannot be passed into the bladder, while in others in which they pass the bulky prostatic mass carries the window and light, or the beak of the sound, so far up and forward into the interior of the viscus that examination of the important area, the post-prostatic pouch, is impossible. In a considerable number of such cases, therefore, exploratory cystotomy offers the only means of detecting the stone.

IX.—CASE OF EXOPHTHALMIC GOITRE IN WHICH THE THYROID WAS EXCISED UNDER COCAINE.

By Dr. J. H. Nicoll.

Mrs. H., æt. 45, seen in consultation with Dr. Wylie on 15th March, 1899, suffering from palpitation, throbbing in head, debility, and dyspnœa, becoming extreme on exertion. The patient was anæmic, the eyeballs slightly protruded, and the pulse ranged from 90 to 110. The carotid and temporal arteries exhibited markedly exaggerated pulsation. There was a moderate enlargement of the thyroid—both lobes and the isthmus.

The patient was admitted to the M'Alpin Home, where, with cocaine employed as a local anæsthetic by hypodermic injection, I removed what constitutes the specimen—viz., the whole of the enlarged right lobe and isthmus, with rather more than half of the enlarged left lobe.

The patient made a good recovery, and is already benefited to the extent that the dyspnœa on going upstairs is markedly less, and the pulse slower by from fifteen to twenty beats per minute.

The use of local anæsthetics alone in excision of the thyroid has lately been advocated by surgeons on the Continent. General anæsthetics in such cases frequently lead to dyspnœa of an alarming kind. This produces two evil results—(*a*) hæmorrhage, severe and troublesome; (*b*) such a degree of laryngeal spasmodic obstruction as to render tracheotomy necessary. Tracheotomy not infrequently leads to septic infection—by way of the tube in the air-passage—of the large spaces left after removal of the thyroid lobes, with ultimate infection of the cellular planes of the neck, and death from pyæmia.

MEETING XIV.—12TH MAY, 1899.

The President, DR. G. S. MIDDLETON, *in the Chair.*

I.—THE OPERATIVE TREATMENT OF SQUINT.

BY DR. FREELAND FERGUS.

Dr. Fergus read a paper on the operative treatment of squint, and showed lantern specimens.

Dr. Rowan said that he was not inclined to go the length of giving up tenotomy altogether, although one came more and more to do advancements. He asked what result Dr. Fergus had had in cases where there had never been binocular vision. At what age could binocular vision be established in them; and if it could not, could the strabismus be cured?

Dr. Fergus replied that it was not uncommon to have difficulty in restoring binocular fixation, especially in tenotomies. If one eye were of much less visual power than the other, it was almost impossible to get good binocular vision. Systematic exercises with stereoscopic pictures were of great value.

II.—NOTES ON A CASE OF CARCINOMA CERVICIS: VAGINAL HYSTERECTOMY BY DOYEN'S CLAMP METHOD.

BY DR. BALFOUR MARSHALL.

Mrs. H., age 49, came to the Glasgow Royal Infirmary in August, 1898, complaining of irregular uterine hæmorrhage during the previous month.

History.—She has had eight children, all at full term, the last born twelve years ago.

Menstruation ceased twelve years ago, at the age of 37, since which time she had been healthy till the beginning of July, 1898, when she noticed a slight discharge of blood from the vagina. This hæmorrhage recurred at intervals during

July, and was marked by the presence of blood-clots and, later, by a bad odour. She had noticed no leucorrhœal discharge, and was quite free from any pain. Her appetite was good, and otherwise she felt perfectly well.

Examination showed an enlarged and slightly nodular cervix. The os was somewhat patulous, and admitted the finger-tip sufficiently to feel an irregular, rough, hard surface, which bled readily. The whole uterus was freely movable, and, so far as touch could tell, there was no affection of the neighbouring cellular tissue or glands.

Diagnosis.—Epithelioma of the cervical canal.

Operation.—On 29th August, 1898, a total vaginal hysterectomy was performed by Doyen's method. The carcinomatous surface was first thoroughly scraped and douched.

An incision through the mucous membrane was made on the anterior half of the cervix close to the junction of cervical and vaginal mucosæ. The pouch of Douglas was next opened by clipping through the posterior fornix with curved scissors. The bladder was then stripped upwards from the cervix, while the uterus was pulled well downwards. The next step consisted in splitting the uterus anteriorly as far as the isthmus, the utero-vesical pouch being opened at the same time. This splitting of the uterus greatly facilitates the pulling of the fundus into the vagina, while hæmorrhage is controlled by traction on the uterus. A Doyen's clamp was then fixed on each broad ligament, as far from the uterus as possible without risking any injury to the ureters. For further safety, a smaller pair was clamped close to the first pair on each side, the uterus being then cut away by scissors.

In an uncomplicated case such as this the operation is easy and rapidly performed, and much superior to the method by ligature. The total operation, exclusive of curetting, took twelve minutes.

After-history.—The clamps were removed in forty-eight hours, and the patient rose on the eleventh day. She was sent home on the twelfth day, and was able to resume household duties a week later.

Later history.—I examined the patient on 9th May, 1899, eight and a half months after operation. She has enjoyed good health, and has been quite free from pain. There is no inclination to vaginal prolapse. There is, however, just above the vaginal scar, a hard nodule of hazel-nut size, which I consider must be taken as evidence of early recurrence. This nodule must be watched, and, if necessary, a second operation undertaken for its removal should it prove to be a recurrence.

Remarks.—The statistics of the after-histories of vaginal hysterectomies for carcinoma are so contradictory as regards good or bad results that it is most important that all cases operated on should be carefully watched, where possible, for several years afterwards. I refer more especially to cases, such as the above, which are seen so early as fully to justify a hope that they are curable by hysterectomy.

In the above case the operation was performed seven weeks from the onset of the first symptom, which was one of hæmorrhage. The uterus was freely movable, and could be pulled down to near the ostium vaginæ, and the parametrium seemed unaffected, yet within nine months of operation there is evidence of recurrence.

Dr. Halliday Croom, in his presidential address[1] before the Edinburgh Obstetrical Society last November, gave a record of fifteen cases which makes painful reading. He says these fifteen cases "fulfilled all the conditions requisite to justify hysterectomy with expectation of success," yet "every one of them died within the year," and "with greater suffering than if they had been left alone." This is a terrible indictment against simple hysterectomy, as the lives of these patients were actually shortened by operation. Dr. Croom's ability and success as an operator are so well known that his statistics are worthy of careful note, and he is deserving of thanks for bringing such a record before us, dismal though it be. As he rightly points out, these are in marked contrast to what one reads of in German statistics, and he refers to the remarkable results of Leopold, who records that out of 76 cases, 72 were free from any recurrence in from one to five and a half years after operation.

In a recently published paper by Landau,[2] there is a record of 123 cases. He operates by means of clamps *per vaginam*, and removes not only the uterus, but the broad ligaments as well. In 48 of these cases the operation was performed over five years ago, and 13 are still well. That gives the satisfactory record of 27 per cent free from recurrence five years after operation. It may be that Landau's better results are due to a more extensive removal of the parametrium, this being only possible by the clamp method. The great importance of an extensive removal of the connective tissue round the uterus even in limited carcinoma is now well recognised, and this has led some of the American gynæcologists to abandon vaginal hysterectomy, and operate *per abdomen.*

---

[1] *British Medical Journal*, 19th November, 1898, p. 1557.

[2] *British Medical Journal*, 29th May, 1899, p. 1269.

Howard Kelly[1] states that for the last three years he has preferred removing the uterus from above, as it allows of a wide exsection of the connective tissue and glands.

Ries and Clark, in America, are now operating *per abdomen*, and make a most extensive removal of all the uterine ligaments as far as the pelvic wall, the ureters being first dissected out and turned aside. They record 15 cases thus operated on, with three deaths, but sufficient time has not yet elapsed to tell whether even this extensive removal of tissue will prevent recurrence.

Landau, in his paper (mentioned above), recommends the systematic removal of recurrences in the scar after vaginal hysterectomy. He quotes a case of Rosenstein's, where the patient was well three years after the removal of the recurrent growth *per abdomen*. Landau has had one similar case, where the growth recurred about two and a half years after vaginal hysterectomy. He removed the recurrent growth successfully *per vaginam*, although the operation was a difficult one. He does not, however, mention if the patient is still well after an interval of over a year.

Carcinoma uteri is, unfortunately, so common that any improvement in the method or extent of operating is much to be desired, and it is a matter of much importance whether we should operate *per vaginam* or *per abdomen* with great removal of tissue, but this can only be decided by carefully recording the after-histories of all cases operated on.

The question of prophylaxis is also an important one. Carcinoma cervicis is most prone to occur in parous women who are the subjects of laceration of the cervix with ectropic endocervicitis and catarrhal patches (erosions). These conditions should have careful attention, especially in women over 35, and it is a question if it might not be well to remove the inflammatory tissue and repair the cervix in all such cases as a means of reducing the risk of malignant disease.

III.—TWO CASES OF MALDEVELOPMENT OF THE GENITAL TRACT IN MARRIED WOMEN—ONE DUE TO OCCLUSION OF THE LOWER THIRD OF VAGINA WITH RETAINED MENSES (CRYPTOMENORRHŒA), THE OTHER TO ABSENCE OF UPPER TWO-THIRDS OF VAGINA, UTERUS, AND ADNEXA.

BY DR. BALFOUR MARSHALL.

It has till recently been generally accepted that the whole of the vagina is developed from Müller's ducts, and that, when congenital, atresia of the lower third existed. This was due either to the non-extension of the ducts downwards, so as to open into the cloaca, or to some inflammatory condition leading to occlusion.

---

[1] *Operative Gynecology*, 1898.

Berry Hart has published a research[1] which throws a different light on the etiology of cases of atresia in the genital tract, and makes them more easily understood. He has shown that the vagina in its upper two-thirds only is formed from the ducts of Müller, whereas the lower third is developed from the urino-genital sinus. The upper two-thirds or Müllerian part of the vagina is formed by fusion of the lower portions of the two ducts of Müller, and ends below at the eminence of Müller, which also marks the upper limit of the urino-genital sinus. A little below this eminence the Wolffian ducts open into the sinus, and at their ends two epithelial structures are formed called the Wolffian bulbs. These bulbs coalesce and give rise to the hymen, while they block that portion of the urino-genital sinus which lies above it and goes to form the lower third of the vagina. The epithelial cells of the coalesced bulbs also undergo proliferation, and pass up into the Müllerian portion of the vagina.

The vaginal canal is later rendered patent by the central cells breaking down, while the opening in the hymen is similarly formed, aided by involution from below.

The two cases of maldevelopment which I now bring before the Society show entirely opposite conditions. The first was a case of cryptomenorrhœa with hæmatokolpos and hæmatometra. The occlusion involved the lower third of the vagina, and therefore that portion developed from the upper part of the urino-genital sinus. The atresia was probably due to persistence of the Wolffian bulbs. All that portion of the genital tract—upper two-thirds, vagina, uterus, and tube—formed from the ducts of Müller was normal, so that, when the menstrual function was established, retention of the menses took place, leading to great distension of the vagina, and, to a slight extent, of the uterus as well.

In the second case the patient has a normal vulva and hymen, but her vagina is represented by a shallow canal only three-quarters of an inch deep, while the upper part of the vagina and uterus are absent. This is therefore a case of maldevelopment due to absence of these structures formed by Müller's ducts, whereas the lower third of the vagina and hymen, which arise from the upper part of the urino-genital sinus and Wolffian bulbs, are present. Menstruation is, of course, impossible in this case owing to the absence of the uterus.

---

[1] *Journal of Anatomy and Physiology*, October, 1896; *Edinburgh Obstetrical Transactions*, vol. xxii, 1896-97.

The following gives the detailed histories of the two cases in question:—

1. *Case of cryptomenorrhœa—Hæmatokolpos—Hæmatometra.*—Mrs. F., age 23½, married three months, came to the Royal Infirmary on 19th January, 1897, complaining of entire absence of menstruation and dyspareunia.

History.—Patient is a tall well-nourished woman, and gave a history of having first noticed a swelling in her right inguinal region five years ago. At first it sometimes disappeared, but during the last three years she noticed it getting gradually larger; and it was often painful, especially on exertion. For four years past she has had pain in the back at intervals. The mammæ were sometimes tender and swollen. She has been troubled with constipation and occasional burning pain on micturition. Three months ago she was married, but all attempts at coitus caused much pain, and were followed by frequency of pain on micturition.

Examination of the abdomen showed an ovoid tumour corresponding in position and size to a 6½ months' pregnant uterus. It had a tense elastic feel, and lay more to the right side, but could be moved from side to side. The corpus uteri could not be felt.

The vulva was normal, and the hymen could be readily distinguished. The lower part of the vagina was completely occluded by a thick septum, which bulged slightly. Recto-abdominal bimanual examination showed the pelvis almost completely filled by a rounded, tense, elastic tumour directly continuous with the abdominal tumour previously felt.

Diagnosis.—Hæmatokolpos due to occlusion of lower third of vagina.

The patient was sent to Ward 30, where on 20th January Dr. Kelly evacuated the contents of the tumour through a crucial incision, a very large quantity of thick, treacle-like, dark fluid escaping.

Patient was dismissed well on 24th February, three and a half weeks after operation.

On examination after operation I found the uterus had been distended sufficiently to admit two fingers, so that in this case there was hæmatometra as well.

After-history.—The patient has proved unusually fertile, as I examined her in April, 1899, little more than two years after operation, and found her between two and three months pregnant for the third time. During the last two years she has been delivered of two full-term children.

Note.—This case is interesting from the comparative freedom of pain in spite of the great distension of the vagina. It was really the interference with marital relations that caused the patient's mother to bring her to hospital.

2. *Case of absence of upper two-thirds of vagina and uterus with adnexa.*—Mrs. C., age 23, married two years, came on 6th March, 1897, complaining of entire absence of menstruation and of dyspareunia. She was otherwise in good health, and free from pain. She was quite devoid of any sexual feeling. To external appearance she was well developed as regards mammæ and vulva. The vagina, however, formed a small pouch only three-quarters of an inch deep. Recto-abdominal bimanual examination could discover no evidence of a uterus and adnexa, nor of the upper two-thirds of the vagina; so that, if present, at all, they could only be mere fibrous cords. There was no tumour in the pelvis to suggest the presence of retained menstrual fluid. Of course, nothing could be done for this patient.

Dr. Carstairs Douglas agreed with Croom, in regard to the former paper, that patients died more rapidly, and in greater pain, than if left alone.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1899-1900.

MEETING VII—26TH APRIL, 1899.

The President, DR. ALEX. MILLER, *in the Chair.*

WILLIAM HUNTER, ANATOMIST: A LECTURE WITH DEMONSTRATIONS OF PREPARATIONS FROM THE OBSTETRICAL SERIES OF THE HUNTERIAN MUSEUM.

BY DR. JOHN H. TEACHER.

Dr. Teacher's paper will be found as an original article in our issue for July, 1899, at p. 15.

MEETING VIII—31ST MAY, 1899.

The President, DR. ALEX. MILLER, *in the Chair.*

I.—THE BACILLUS COLI COMMUNIS IN PUERPERAL SEPTICÆMIA.

BY DR. JOHN M. MUNRO KERR.

Dr. Munro Kerr's paper will be found as an original article at p. 174.

II.—MISSED LABOUR.

BY DR. W. M'FARLANE.

Dr. M'Farlane's paper will be found as an original article at p. 177.

III.—CASE OF INCOMPLETE RUPTURE OF UTERUS, SHOWING THE RETRACTION RING.

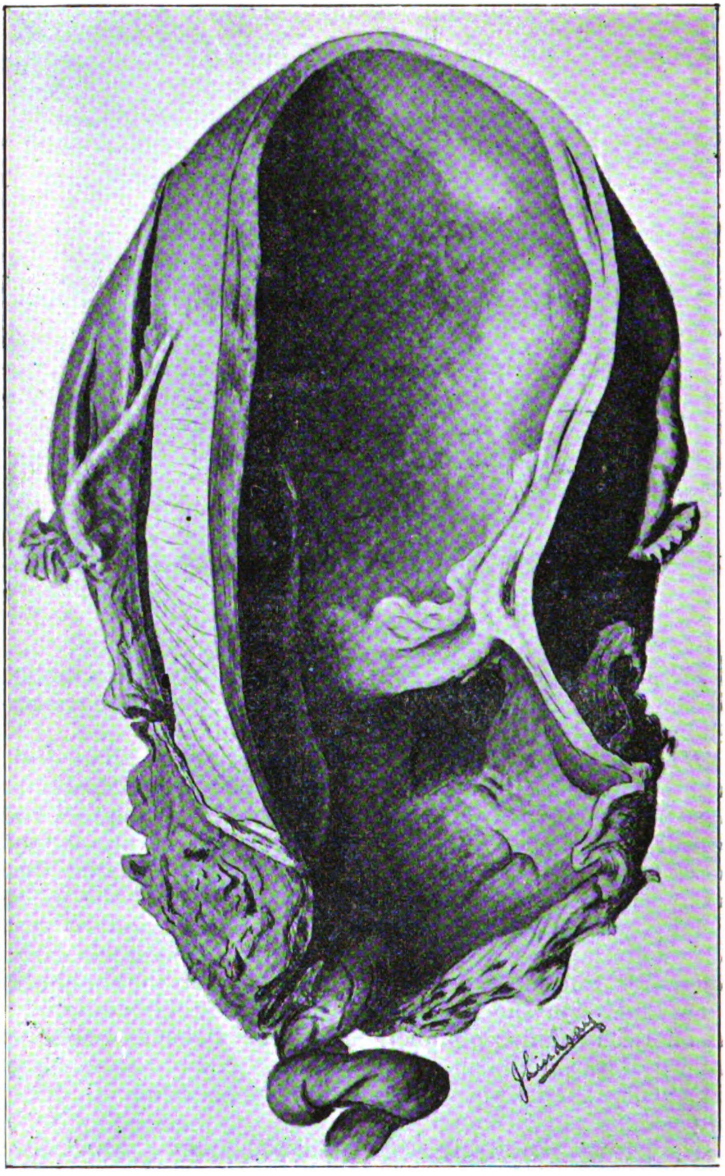
BY DR. ROBERT JARDINE.

Mrs. S., iii-para, æt. 24, full time. The patient was brought to the Maternity Hospital from some distance in the country. She was pulseless.

History.—Her former labours had been easy. The doctor who brought her in stated that this time he had found the face presenting mento-posterior. After the membranes were ruptured the face did not advance, so forceps of various kinds were tried without avail. It was then noticed that there was what was called an hour-glass contraction of the uterus. Version was decided on, and the hand passed into the uterus, but on attempting to bring a foot down the patient suddenly collapsed. She was then brought to hospital in the ambulance.

On admission she was pulseless and dying. A deep groove was noticed running obliquely across the abdomen about the height of the umbilicus. This was apparently the retraction ring. The uterus was evidently ruptured below it. There was no external bleeding.

The patient was freely stimulated and given a saline injection, but she died before much of the fluid was absorbed. The uterus was removed *post-mortem* by Dr. Weir shortly after death.



We found the rupture was not through the peritoneal layer. The effused blood extended nearly round the uterus and into the broad ligaments. It had lifted the peritoneum off a considerable part of the lower uterine segment, where it is loosely attached.

The uterus, with the child *in situ*, was hardened in formalin for several months. It was then opened down the posterior wall, and the child removed. The greater part of the posterior wall was afterwards cut away in order to get a drawing made of the condition (see illustration).

You will notice (1) how prominent the ring is; (2) how thinned out the part below is—*i.e.*, the lower uterine segment; (3) the position of the rupture just below the ring; (4) its shape, practically that of the back of the closed hand; (5) the remains of the hæmatoma, which lies all below the ring, showing how the peritoneum is loosely attached over the lower uterine segment, and firmly at the ring.

There are several practical lessons we should all take to heart from such a case. In the first place, given a face presentation, especially a mento-posterior position, with the os fully dilated and the membranes intact, what is the best treatment? I always pass my hand in and bring the occiput down, if possible; and if this is impossible, I turn at once. When the liquor amnii has been drained away, and the face is jammed down, turning should never be attempted if the forceps fail. Craniotomy should then be done. In any case, face or any other presentation, if the retraction ring is at all palpable, turning should never be attempted.

Version, after failure with forceps in vertex presentations, is sometimes done. In going through the records of the hospital I have come across a number of such cases. In very few of them was the child saved, and in some the mothers died shortly afterwards. Two out of three cases of rupture of the uterus I have seen have been caused in this way. If axis traction forceps hold, and do not bring the head through, I never attempt version. If the child is vigorous you may do symphysiotomy; I have invariably done craniotomy.

IV.—FIBROID TUMOUR AND UTERUS REMOVED BY PORRO'S OPERATION.

By Dr. Robert Jardine.

Mrs. M., ix-para, æt. 43, full time. The patient's former labours had all been natural. Some seventeen years ago she had torn her urethra by falling. This had been successfully repaired. She had a recto-vaginal fistula of considerable size, but whether or not it was the result of the same accident we could not ascertain. Her last child had been born two years ago without any difficulty. Her periods had been profuse, but she had never flooded. Some months ago she had been under treatment for dropsy. Dr. Rankin, who had sent her into hospital, had been her medical attendant for many years; but, so far as we could learn, had not known of the presence of a tumour until he was called to her in labour.

On admission she was very anæmic and exhausted, with a feeble pulse of 130. She had evidently lost a good deal of blood. The uterus was tonically contracted, and a small subserous fibroid could be felt about the level of the umbilicus. The cord was prolapsed and pulseless. The os was high up and to the front at the level of the top of the symphysis pubis. It admitted two fingers transversely. A large hard tumour filled the pelvic cavity, and completely blocked the way. It was evidently a fibroid.

The patient had been in labour for a long time, and the membranes had been ruptured several hours. The urine contained considerable albumen.

The case appeared utterly hopeless. Craniotomy was out of the question, so the only alternatives were to leave her to die undelivered or to do a Porro. I decided to operate, and did so as soon as possible, assisted by Drs. Edgar, Oliphant, Kerr, Black, and the residents. Before giving her $CHCl_3$ she was freely stimulated with strychnine hypodermically.

On opening the abdomen we found it impossible to get an elastic ligature round the uterus before emptying it, so it was incised and the child removed. The tumour was attached so low down, and so jammed in the pelvis, that we found considerable difficulty in getting it up and an elastic ligature round the cervix. The tumour and uterus were cut away, and the stump, clamped with a wire ecraseur, was fixed in the lower end of the wound with pins. The outer parts of the broad ligaments had to be stitched. About a quart of saline fluid was left in the peritoneal cavity. The whole operation took about an hour and twenty-five minutes. The difficult part was getting the tumour and uterus out of the pelvis and the elastic ligature round it.

She stood the operation well, but was very sick for twenty-four hours. Unfortunately we could not feed her by the rectum, as the fistula prevented retention. She did very well for forty hours, and we were beginning to have hopes of her recovery, when she suddenly collapsed and died within an hour, apparently from delayed shock. There was no hæmorrhage.

I show you here the tumour and uterus, which weigh 4½ lb. I have also the stump of the cervix, the bladder, rectum, and vagina. The repairing of the urethra has drawn the meatus well up into the vagina. The opening into the rectum, which admits two fingers, is above the sphincter.

V.—FRACTURE OF THE FŒTAL SKULL, WITH INJURY TO THE BRAIN.

By Dr. Robert Jardine.

The mother's pelvis was contracted, the diagonal conjugate being 3¾ inches, giving a true conjugate of about 3 inches. This was her third confinement, the other two having been instrumental ones. The first child was still-born, the second alive and still surviving. This time delivery was effected by axis traction forceps in the Walcher position without much difficulty after a short trial in the ordinary left side posture.

The child, which weighed 6¾ lb., breathed at once and seemed all right. There was a small hæmatoma of the scalp. There was no depression of the skull. It seemed all right except that it was restless. About seventeen hours after delivery it was supposed to be sleeping, but was found to be dead.

At the *post-mortem* a comminuted fracture of the left frontal bone was found, with laceration of the brain and cerebral hæmorrhage in that region. There was also some hæmorrhage into the scalp. The fracture had been caused by the pressure of the promontory and not by the blade of the forceps.

REVIEWS.

On the Physiological Perception of Musical Tone (The Boyle Lecture for 1899). By J. G. M'Kendrick, M.D., LL.D., F.R.SS. L. & E. London: Henry Frowde. 1899.

In this monograph Professor M'Kendrick describes the various theories as to the way in which the organ of hearing performs its function.

It opens with an anatomical description of the structures concerned, followed by a digression into those acoustical matters which are indispensable for the proper understanding and criticism of the various theories.

The description of Helmholtz's view is very clearly set forth, and although the author is in favour of that view, he shows plainly the objections to it, and the extent to which these may be explained away.

The analysis of a compound harmonic wave-form into its simple constituents, by means of the instrument designed by the author, is exceedingly interesting, and would have been of great interest to Helmholtz, as illustrating and supporting the correctness of his hypothesis. The harmonic motions analysed by this instrument are, of course, of much longer period than those which produce the sensation of sound in our ear, but the principle of their analysis is the same.

The views of Voltolini, Rutherford, Max Mayer, and others, are given and criticised in an impartial way, and the author is justified in coming to the conclusion that Helmholtz's theory is the most satisfactory as yet made public. What appears to the reviewer to be the most cogent objection to Helmholtz's theory is that it necessitates the assumption that a single nerve-termination only is stimulated by a single pure tone, *unless we introduce some other physiological factor*, which Helmholtz did not seem to be aware of. Now, it is, to say the least, extremely doubtful if such a state of matters occurs in any other organ of special sense.

The monograph will be very useful to physiologists and aurists, as it gives concisely all the latest theories of hearing, and a criticism of them by one whose authority on physiological acoustics is supreme.

General Physiology: an Outline of the Science of Life. By MAX VERWORN, M.D., Ph.D. Translated from the Second German Edition and Edited by FREDERICK S. LEE, Ph.D. With 285 Illustrations. London: Macmillan & Co., Limited. 1899.

MODERN PHYSIOLOGY finds an excellent and sympathetic exposition in the present volume. It has a literary and philosophic, as well as a scientific, merit, and is admirably suited to accomplish the author's purpose to appeal, not only to his fellow-physiologists, but also to any interested scientific reader. It is a clear and comprehensive statement of the general principles of cellular biology, and the more subtle and fundamental problems are treated in a spirit agreeable to the tendencies of the age, yet displaying original and independent thought. As, on the whole, his conclusions are in harmony with, or are the logical consequence of, modern physiological teaching, to review this book is also to make a commentary on the physiological dogmas of the present century.

It may be worth bearing in mind that the thought of a period may be the basis of its own further elaboration, or it may be destined to be superseded by antagonistic ideas. Is physiology about to undergo a further evolution on its present lines, or undergo a revolution and take a new direction?

So great is the accumulation of facts and theories, that original research in the various departments of this science has for a very considerable period been carried out by workers independently of each other, and, having little or no regard for each other's aims, they have arrived at irreconcilable conclusions. This fact is not openly admitted by physiologists, but an attitude of pseudo-consistency is maintained, and Professor Verworn, like other teachers, seems to think that their combined efforts will culminate in a harmonious whole. Where opinion is divided he gives an impartial statement of both views, yet even when a certain conclusion seems just about to be arrived at, he is guilty rather of adopting the more prevalent view than of holding on with bulldog tenacity of purpose to logical sequence.

A short historical study forms a suitable introduction to the rest of the work. In text-books this aspect is usually inadequately treated or omitted. Of the different points of view from which a science may be treated, the historical has the greatest educative value. Besides the individual interest associated with historical names which form landmarks, the record of the development of physiological ideas forms a natural mental picture, and as the student notes how, from time to time, new principles evolve themselves, and either adapt themselves to, or come into conflict with, existing ones, his critical as well as his acquisitive faculties are exercised, and he is able to guard against error in current teaching which, unhappily, may exist.

The "method of physiological research" which forms the subject of the next section is a commendable adjunct to a physiological text-book, though also frequently omitted.

Professor Verworn enters into an analysis of the grounds on which the acquisition of knowledge rests, and in contra-distinction to the pessimistic view recently revived by Du Bois-Reymond, he holds that truth may with certainty be arrived at. While he holds that truth may be arrived at, it can scarcely be held that he has left nothing more to be said about this abstruse matter. In spite of his assertion to the contrary, he betrays here also an incapacity to rid himself of a consciousness of contradiction pervading psychology as well as throughout his discourse on physiology.

In a detailed account of the problem of the origin of life on earth, he tells us that the earth at one time, being an isolated and incandescent body, may be regarded as a sterile and isolated medium. But on a sterile and isolated medium life never originates—life presupposes pre-existing life. If these data are true, instead of there being life, there should be no life on earth. Either, it must be admitted, that the antecedents of the earth have always been compatible with life—that life is eternal; or the dictum that life presupposes life is only a relative and not an absolute truth. From the nature of the subject, the condition of the earth and solar system at vastly remote periods is a matter for conjecture, nothing is known—the observations and experiments disproving a-biogenesis have culminated in one of the most certain triumphs of the inductive method. There are other reasons, to which we will afterwards refer, for holding that neither quickly nor gradually could life be created *de novo*, *i.e.*, life has always existed. The distribution of life in the universe has undergone some imaginative and but little scientific treatment. Yet, so far as our knowledge of the nature of life carries us at the present moment, we must conclude that life has always existed, and that it exists elsewhere than on the earth.

In respect to other problems to which more general attention has been paid than to the origin of life, conflicting conceptions are also entertained. A perusal of writings on the subject of descent, and on the affiliation of the different forms of life, shows that this aspect of biology has been cultivated with little or no reference to cell phenomena and the cell theory of life; and contrariwise, writings on the latter subject have been cultivated with equal negligence of those on the former. Why should the cell theory and the doctrine of descent show no mutual bearing? In the elaboration of the doctrine of descent the individual has been regarded as the biological unit, but in the elaboration of the cell theory the corpuscle is the biological unit. Obviously, biology having two units, is at present a dual science. If the corpuscle, as Professor Verworn holds, is the true scientific unit of biological reasoning, let it be used in consideration of the idea of descent. Weismann and others, using the corpuscle as the biological unit, have shown defects in the heretofore accepted explanation of heredity, but partly being unable to keep out of mind the older unit—the individual—and partly by infusing hypothetical elements into the corpuscle in order to facilitate their new explanations of heredity, they have complicated, rather than simplified, the problem. It is an advance, however, that they recognise that the corpuscle must be used as their ultimate unit of reasoning, and if the corpuscle were used as the basis of reasoning in the theory of descent, the idea of "natural selection," or the "survival of the fitter," will hardly find a place in biology—at least it has not yet been shown that the principle of selection takes place in cell phenomena. There is such a certain savour of anthropomorphism about these phrases that at present it is safer to regard the conception as affording a plausible, rather than a conclusive, argument.

In adopting the fashionable conception of the nature of the corpuscle, Professor Verworn is again in mistaken sympathy with the times. The corpuscle is regarded as essentially an exceedingly complex, mobile or labile chemical compound, and this gives it the faculty of automatically maintaining its own existence through perpetual change. The manufacture of life, or the artificial formation of living corpuscles, is, therefore, theoretically a problem of chemical synthesis, and its advent merely a question of time. The mechanism of life is the conduct of the molecules that constitute the corpuscle. In the minds of most physiologists, by Verworn called biogens, there are biological bodies intermediary between chemical substances and the corpuscle. They help to form a picture of life, and are on that account supposed to be where they are pictured. Let us suppose that synthetic chemistry has reached such perfection, that an organism has been formed—if it were inferior to existing organisms it would be useless; if it were equal, it would be superfluous; and if it were superior, it would be dangerous. So that the consummation of chemical synthesis points to no good. Yet, we who laugh at those of a former age who attempted to get perpetual motion out of clockwork, try to construct automata out of chemicals. Chemical processes are essential to life, but there are other factors essential to it.

Archives of Neurology and Psychopathology. 1898. Vol. I, No. 4. Utica, N.Y.: State Hospitals Press. 1899.

THESE *Archives* are the continuation of the *State Hospitals Bulletin*, which was the medium of publication of the researches carried on in the New York State Hospitals and their Pathological Institute during the two years in which the scientific work of these establishments was being arranged or organised. The new title is intended to indicate more accurately the character of the investigations now carried on.

The present number contains five papers. The first, by William A. White, is entitled "Preliminary Experimental Studies in a Case of Amnesia with a Discussion of their Psychopathological Significance." The second is one on "Acromegalia," and will be again referred to. The third, by Ales Hrdlicka, deals with the "Dimensions of the Normal Pituitary Fossa or Sella Turcica in the White and the Negro Races—an Anatomical Study of Fifty-seven Normal Skulls of White and Sixteen Normal Skulls of Colored Individuals." The aim of this research is, properly speaking, to ascertain the normal size of the pituitary body, but as this organ does not readily lend itself to accurate measurement, and as the sella turcica exceeds it by a slight and apparently almost constant quantity, the bony case of the hypophysis is made the actual subject of study. Ward A. Holden has a paper on "A Case of Excessive Distortion of the Optic Chiasm in Acromegalia," and, finally, Richard H. Hutchings contributes a "Report of Two Cases of Acromegalia, with Remarks upon the Mental Condition in this Disease."

The paper by Dr. Harlow Brooks is an admirable, well-written, and most interesting monograph on acromegaly, and it is supplied by Miss Busck with an excellent bibliography of the disease, which is brought up to the present year. The essay occupies 163 pages of the *Archives;* then follows a series of plates, and then we have the bibliography in other 26 pages.

Dr. Brooks gives the results of autopsies on three cases, one of which was reported from the clinical point of view some ten years ago, being the first case reported from America. The disease had made no progress during the last few years, and the patient died from acute nephritis. At the *post-mortem*, the body was recorded as that of a gigantic female. Dr. Brooks goes into the anatomy of his cases with great detail, but in this we need not follow him here. He afterwards proceeds to a general discussion on acromegalia, beginning

(Chapter IV) with a historical review. The search for early cases among the skeletons in museums naturally brings us to the question of gigantism, whose relationship with acromegaly is, perhaps, even less clearly understood, now that acromegaly is well-known, than in the earlier days of Marie's writings. Sternberg carries the literature as far back as 1552, and states that 20 per cent of his collected cases are of the gigantic type. Dr. Brooks expresses his entire agreement with Joffroy, "that when persons not yet fully grown are affected by acromegalia they become giants, while those who have already achieved their full stature before the onset of the disease, are not usually rendered morbidly gigantic." Schütte regards acromegaly as a secondary disease, which is very prone to attack giants. On the other hand, Brissaud and Meige have reported cases in which gigantism followed acromegaly.

Chapter V is on the etiology, course, and symptomatology; Chapter VI, on the physical signs; and Chapters VII and VIII, on the pathological anatomy of acromegaly. The last is treated at great length and cannot be even summarised here. Dr. Brooks, however, remarks that general connective tissue hyperplasia is the characteristic pathological process of the disease. In nearly all cases that have come to autopsy, the hypophysis cerebri has been found enlarged. Chapter IX is devoted to general considerations on the pathogenesis of acromegalia. The writer here discusses five different theories of the disease based on anatomical data, only to reject them as untenable. In Chapter X, he discusses a sixth—viz., that acromegaly is due to disease (*i.e.*, in general) of the pituitary body. This theory also he rejects. His study of the disease leads him to believe that the pituitary body furnishes a secretion which contains some principle which acts directly on the connective tissues. He believes, further, that the various lesions of the hypophysis recorded in cases of acromegaly produce disease by affecting the functions of the gland.

This leads to alternative possibilities. The disease is due either to diminution or loss of function of the gland, or to excess of function. The former view is rejected by Dr. Brooks, and certainly the extent to which the hypophysis can be destroyed by a tumour without causing acromegaly is a strong argument against it. Chapter XI is devoted to the alternative possibility—viz., a specific lesion of the hypophysis, consisting in an increase of the cells of the anterior lobe or prehypophysis; or, in other words, hyperplasia and adenoma of the gland. Here the writer frankly admits that the recorded observations of sarcoma and allied growths far outnumber the instances of hyperplasia and adenoma. But he does not consider this difficulty a serious one. "The mistake of confounding hyperplasia and even adenoma of the gland for sarcoma might be very easily committed indeed. The glandular structure of the hypophysis is rather atypical, its cells are small and rather densely huddled together, and the connective tissue is very scanty. Consequently in an hyperplastic overgrowth the appearance resembles, very closely indeed, a sarcoma of the small round-celled or lympho-sarcomatous type." Not only so, but one author admits that in studying his first case, so long as he had no working hypothesis, except the conventional one that any lesion, but especially a neoplasm of the pituitary body, could induce acromegaly, he himself considered the growth to be a small round-celled sarcoma. Soon afterwards, however, a second case was so plainly one of adenoma of the prehypophysis, that he began to reflect on the concurrent changes in the function of the gland; and renewed study of the first case in the light of the hyperfunction theory, showed plainly that what he had set down as sarcoma was really hyperplasia. But for this theory, his third case would have been misunderstood in the same way. The absence of metastases and the commonly slow growth of these tumours certainly tells in favour of the theory held by Dr. Brooks, and first advanced, he says, by Tamburini.

With the remark that diagnosis and treatment are not neglected by our author, and that the paper concludes with a review of some of the most recent literature, we shall bring to a close this already too lengthy notice of Dr. Brooks's valuable monograph.

Enlargement of the Prostate: its Treatment and Radical Cure. By C. MANSELL MOULLIN. Second Edition. London: H. K. Lewis. 1899.

THE second edition of this well-known work shows a marked advance on its predecessor (1894). The general recognition of the view previously upheld by the author (that the prostate is part of the sexual, not of the urinary apparatus) has done much to clear the subject of ambiguities and conflicting theories, and to allow it to be presented in a thoroughly scientific fashion.

After a careful and exhaustive description of the structure and function of the prostate, of the nature and varieties of the enlarged prostate, and of the causes, symptoms, and effects of prostatic enlargement, the author proceeds to the consideration of the general and local treatment of the disease, and displays to the reader the wonderful fulness of the therapeutic resources that are at his command. It is only necessary to peruse this section to see how numerous these are, and to appreciate the perspicuity with which the details of treatment are given.

The question of radical treatment is fully stated, and the various operations are so described that the book is of equal value to the surgeon and the practitioner. It is interesting to observe that prominence is given to contributions to this branch of surgery by our townsman, Dr. Nicoll. The catheter cases which he has devised are also warmly commended.

The hitherto vexed question of orchidectomy in the treatment of prostatic enlargement is dealt with at length, and in the light of the writer's own experiences, with the result that its position in surgery is assured. The cases likely to benefit by it are carefully described.

The author's boast that "there is now no case of enlargement in which perfect relief cannot be obtained, provided, only, the secondary consequences which so often and so entirely unnecessarily follow it," are avoided, is made good in the course of the book, which we warmly recommend to all readers.

A Text-book of Pathology. By ALFRED STENGEL, M.D. Illustrated. London: The Rebman Publishing Co., Limited. 1899.

IN his preface the author tells us that he has tried to present the subject of pathology in as practical a form as possible, and always from the point of view of the clinical pathologist, prominence being given to pathological physiology, and discursiveness and citation of authorities avoided. To limit the size of the work, discussion of methods of examination has been omitted, and for the same reason the author has excluded the pathology of the skin and of the organs of special sense.

The book contains 372 illustrations, the majority of which are remarkably good, and among these are a number of very successful photo-micrographs. We consider, nevertheless, that no drawing of a microscopic section is complete without a note of the magnification employed, and regret especially that such should have been omitted in so many of the illustrations of micro-organisms and microscopic animal parasites. A list of illustrations, too, might with advantage have been added.

There are many good chapters in this work, and the three devoted to diseases of the nervous system seem specially complete. Here, in the compass of five and a half pages, is a summary of much of the recent work on the finer pathological changes in the nerve-cell. This field, however, is still being opened up by pioneers, and we question the advisability of so seriously setting down in a text-book for students such a chaotic mass of facts.

In the space of eight hundred pages, then, Dr. Stengel completes his task, and we consider that on the whole the work has been well done, though in parts conflicting and contradictory statements and observations are heaped up, and presented in rather a crude and non-assimilable form. We think, further, that much of this crudity might have been avoided by a judicious citation of authorities, for, in our experience, isolated observations have not the vitality they possess when linked with the names of their discoverers, and the same applies very specially to theories and their promulgators.

The work throughout is too much an epitome of all that has been done in the realm of pathology, and we rather fancy that if the author had attempted less, he would have accomplished more.

Ocular Therapeutics. By MAX OHLEMANN, M.D. Translated and Edited by CHARLES A. OLIVER, A.M., M.D. London: H. Kimpton. 1899.

THIS book aims at giving an outline of the treatment of all the diseases of the eye, and is divided into a general and a special part.

In the first part the author discusses Mechanical Treatment, Thermic Agents, Chemic Agents, Electricity, &c. In the second part details are given as to the treatment of the various diseases to which the eye is liable.

No fewer than two hundred and twenty-six prescriptions are included in the text, so that there is unquestionably a vigorous attempt to hit the nail on the head. Therapeutics, however, is not synonymous with prescription writing, and a collection of this kind is in the main productive rather of confusion than of lucidity. Modern ophthalmology is devoted, and that properly, rather to the investigation of the causes of disease than to the accumulation of lists of remedies which have been tried, and, we may add, have in great part been found wanting.

Medicines no doubt have a most important place, but the days are past when the scientific surgeon will lay much stress on their exact proportion and combination. When a surgeon is an adept at writing numerous prescriptions for all sorts of lotions and drops, a very easy thing to do, but totally neglects the precaution of satisfying himself that these preparations are sterilised before being used, then it is certain that he has little idea of modern work.

This book will, however, be found a reliable guide in many things, although such useful information as it contains will be found in any good text-book of ophthalmology.

A Treatise on Unripe Cataract. By WILLIAM M'KEOWN, M.D., M.Ch. London: H. K. Lewis. 1899.

THIS is an important book, for it is an account by a distinguished surgeon of operative proceedings which he himself has invented, and with which his name is prominently connected. In brief, it may be said to be a full description of his methods of intraocular injection and irrigation.

After reading the volume through, the impression which it makes is that Dr. M'Keown advocates proceedings which enormously increase the armamentarium of the operator, and make it almost impossible for anyone to operate outside of a room specially adapted for the purpose. Now, if it can be shown that his complicated method is more fruitful of excellent results than any other, then it ought to be adopted, even at the expense of greatly increased inconvenience. It may be true that it does so, only the present publication by no means proves it.

By intraocular injection, the author means the injection of a few drops of fluid into the substance of the lens with the view of maturing the cataract.

By intraocular irrigation, he means the removal of the cortical matter after the extraction of the nucleus by means of a jet of water.

Possibly much is to be said for the process of injection.

Certainly the proceeding of artificial ripening by iridectomy and massage has not proved very satisfactory in the hands of most surgeons who have tried it, and Dr. M'Keown's suggestion may be of considerable value.

As regards the removal of cortex by irrigation during or immediately after a cataract operation, we are not so sure. The advantages to be gained by the introduction of so much apparatus in so simple an operation must be very great before the surgeon is justified in thus complicating matters. To begin with, Dr. M'Keown warns us against the danger of leaving any lens cortex in the anterior chamber. But he does not even state, much less prove, what that danger is. Surely Dr. M'Keown does not still hold the opinion that it may be a cause of iritis or of iridocyclitis. Again and again modern operators have filled up a patient's anterior chamber to overflowing with lens substance in operations for myopia, and no iritis whatsoever has resulted. How then is it possible that a few fragments of lens can, in these cases, cause an iritis? Where plastic iritis occurs after a cataract operation the condition is almost certainly septic. By plastic iritis is not meant the adhesion of the iris to a cicatrising capsule, but an iritis with plastic formation. And there are operators in whose hands such a condition almost never supervenes.

If the extraction be a normal one, any slight opacity which may remain from cortex left in the anterior chamber is easily and safely treated by needling. We confess, therefore, that although Dr. M'Keown's method is ingenious, and shows him to be an original thinker, still it seems to us to be somewhat of the nature of a work of supererogation.

An Essay on the Nature and Consequences of Anomalies of Refraction. By F. C. DONDERS, M.D. Edited by CHARLES A. OLIVER, A.M., M.D. London: H. Kimpton. 1899.

WE scarcely see the need of this publication. The true student of ophthalmology will no doubt go to the fountain-head for himself, and a book of this kind can be of little value to him.

Unquestionably the name of Donders will always occupy a prominent position in the history of ophthalmic science, but his record is in his standard book, *The Accommodation and Refraction of the Eye,* and this essay is comparatively of little value.

Modern Cremation: its History and Practice to the Present Date, with Information relating to all recently Improved Arrangements made by the Cremation Society of England. By SIR H. THOMPSON, Bart., F.R.C.S., M.B.Lond., &c. Third Edition, revised and much enlarged. London: Smith, Elder & Co. 1899.

AN impartial reader of this volume can scarcely henceforth be anything but a sturdy supporter of cremation; and even an individual who, on the grounds of sentiment, has hitherto had a lingering attachment to earth-burial, must find such attachment loosened to a serious extent by the perusal of this volume.

The Cremation Society of England has now been in existence for a quarter of a century, and this period has seen the movement make substantial progress from the most modest of beginnings. The feeling in favour of this mode of disposing of dead bodies has grown in a striking way on the Continent. Modern cremation had its origin in Italy, but one of the best illustrations of its increasing popularity in recent years is afforded by the case of Germany, which has now thirty-seven cremation societies, with a membership of 37,600, and at the beginning of last year possessed only twenty such societies, with a membership of 12,000. The practice is perhaps more popular in Sweden than in any other country, though the present state of the law is not very favourable to it.

Incidentally, the Cremation Society of England has done an admirable piece of work, for which it deserves the gratitude of the nation. The Council of the Society called the attention of Government to the very unsatisfactory method of death-certification followed in this country. The Home Secretary of the day accordingly granted a Special Committee of the House of Commons, which, after making due inquiry, found that the allegations made by the Society were accurate, and, moreover, recommended that the remedies proposed by the Society should be carried out by legal enactment. Unfortunately, owing to the change of Government which soon afterwards took place, no such law has yet been passed.

Sir Henry Thompson puts the case for cremation very fairly and yet very seriously, and, moreover, in a style that keeps the reader interested from beginning to end. While pointing out the great advantages of cremation, with its freedom—provided that a proper mode of death-certification is used—from any objectionable feature whatever, he rightly dwells especially upon the evils of earth-burial in the neighbourhood of large towns—evils already great, but inevitably destined to become more serious as the growth of large communities continues. The appropriation for the dead of increasing areas of land that Providence has intended for the living; the unnatural retardation of putrefactive processes by coffin- and earth-burial; the accumulation of putrefactive foci which may year after year poison the atmosphere by gaseous, and the water by soluble, products; the non-destruction, when so favourable an opportunity occurs, of countless pathogenic organisms which have already brought death to our fellow-creatures, and may, by their transmission in a living state to the surface soil, find only too favourable an opportunity of disseminating themselves among living human beings; and the economic loss to the nation by the artificial retardation of those putrefactive processes which nature has appointed in order that dead animal matter may sustain vegetable life for the benefit of living animals—all these are considerations which confer a grave responsibility upon those who, recognising their importance, and at the same time free from any objections to cremation, yet fail to do what they can to promote the movement in its favour. It might prove a great step in advance for the public health if the bodies of all who die from any infectious disease, or any disease recognised as due to a pathogenic organism, were destroyed by cremation.

Sir Henry Thompson's work gives a full account of the history of modern cremation, for which he has done such splendid service. He also indicates the great value of cremation, and gives the argument for its use as he first presented it twenty-five years ago, and as supported by later experience. Information is given in an appendix as to the Cremation Society of England, the mode of arranging a cremation, with details, and the mode of certifying deaths in Paris and other large cities of France.

This little volume should be read by all who truly seek our national health and wealth.

Anæmia and Some of the Diseases of the Blood-forming Organs and Ductless Glands. By BYROM BRAMWELL, M.D., F.R.C.P. Ed., F.R.S. Ed. Edinburgh: Oliver & Boyd. 1899.

THE diseases considered in this work are chlorosis, pernicious anæmia, leucocythæmia, Hodgkin's disease, Addison's disease, myxœdema and sporadic cretinism, exophthalmic goitre, and acromegaly. Dr. Bramwell is an admirable teacher, and has put the present work very much in the form of lectures. The account of each disease is a comprehensive, lucid, well written, and thoroughly up to date essay upon it, and the author is in the fortunate position of being able to base his descriptions upon his personal experience. The abstracts of his cases, and the tables which he has drawn up, at the necessary expense of much time and labour, are valuable contributions to medical literature. We have noted scarcely any omissions, and none of any importance from the author's point of view. But, as he explains in the preface, the work is essentially based on his own clinical and pathological experience, so that it is not surprising to find the school of which he is so distinguished a representative figure more prominently than do others in this book. We heartily commend the work. We are satisfied that no practitioner who wishes to get a thorough knowledge of the diseases described here, as they are known to medicine at the present day, could do better than master Dr. Bramwell's account of them.

Atlas of Urinary Sediments, with Special Reference to their Clinical Significance. By DR. HERMANN RIEDER. Translated by FREDERICK CRAVEN MOORE, M.Sc., M.D. (Vict.). Edited and Annotated by A. SHERIDAN DELÉPINE, M.B., C.M. (Edin.), B.Sc. With 36 Plates, comprising 167 Figures (many in Colours), and several Figures in the Text. London: Charles Griffin & Co., Limited. 1899.

THIS *Atlas* will be welcomed by the diligent student and by the teacher. Dr. Rieder, the author, had the advantage of being assistant in the medical clinic of Professor v. Ziemssen at Munich, and the illustrations were prepared from his original specimens by the University draughtsman. The plates are intended to represent all urinary sediments of any importance, only some very rare ones being purposely omitted. The preface to the German edition bears date November, 1897. Professor Delépine supplies 16 out of the 20 figures which are incorporated in the text.

After the prefaces we have a synoptical table of contents, and then the whole of the plates, which number 36. Most of these contain 6 figures apiece, but some have fewer, the figures in the plates numbering in all 167. The plates are followed by 99 pages of text, besides a short bibliography and indices. Elaborate instructions are given for obtaining and examining urinary sediments. Sediments are classified as organised and unorganised, and Sahli's arrangement of the latter group is adopted, thus—

Readily soluble on heating,	*Urates.*	
Not soluble on heating		
Soluble in acetic acid,	*Phosphates,* .	without evolution of gas.
	Carbonates, .	with evolution of carbonic acid gas.
	Ammonium urate,	after 10 to 15 minutes, separation of uric acid.
Not soluble in acetic acid, . . .	*Calcium oxalate,*	soluble in hydrochloric acid.
	Leucin, tyrosin, xanthin, cystin, *Uric acid,* . .	insoluble in hydrochloric acid.

The unorganised and then the organised sediments are discussed in their order, the annotations by Professor Delépine constituting quite a considerable part of the whole text. The accidental contaminations of urinary sediments are not neglected, and the editor contributes a section on the preparation of permanent specimens of urinary sediments.

Messrs. Griffin are to be congratulated on their enterprise in producing the English version of this work. It has gained immensely in value through the editorship of Professor Delépine, and the work of translation also appears to have been creditably performed. The plates are possessed of merit of a high order, and, together with the text and annotations, ought to prove a boon to English-speaking students and clinicians.

King's College Hospital Reports. Edited by Nestor Tirard, M.D., F.R.C.P.; W. Watson Cheyne, F.R.C.S., F.R.S.; John Phillips, M.A., M.D., F.R.C.P.; and W. D. Halliburton, M.D., F.R.S. Vol. V (October, 1897 to September, 1898). London: Adlard & Son. 1899.

THE present volume is drawn up on lines very similar to those that have distinguished its predecessors, and the editors express themselves gratified by the continued success of the publication, as shown by the increasing number of subscribers, its cordial recognition by the medical press, and the frequent references made to its pages. The contents include Part IV of a historical sketch of King's College and King's College Hospital, by Dr. John Curnow, which is illustrated by a portrait of Sir William Fergusson, Bart., and two portraits of Mr. Richard Partridge, F.R.C.S. Among the other contributions are papers by Dr. Dalton, on chronic enlargement of the spleen; by Dr. Phillips, on uterine myomectomy by the vaginal route; by Mr. Carless, on gastrostomy for malignant disease of the œsophagus; and by Captain French, R.A.M.C., on some points in connection with syphilis.

The Year-Book of Treatment for 1899: A Critical Review for Practitioners of Medicine and Surgery. Illustrated. London: Cassell & Co., Limited.

THIS publication is now recognised by those who would keep in touch with all that is new in practical therapeutics as of great value.

This, the fifteenth annual issue, is published on the same lines as formerly, and the contributors are, with one or two exceptions, the same as last year.

The work on Diseases of the Lungs and Organs of Respiration has been summarised by Dr. Vincent Harris, Physician to the City of London Hospital for Diseases of the Chest, a part formerly undertaken by Dr. Gustave Schorstein.

We have also a new contributor in Dr. Burton-Fanning. Of late much importance has been attached to the out-door treatment of phthisis, and from this writer, who has had practical experience of the treatment as carried out at Cromer, we have a valuable communication. In his article he indicates the general principles underlying the treatment, and gives some details of the methods as carried out at Goerbersdorf, in Silesia; Falkenstein, in the Taunus; Hohen-Honnef on the Rhine; Nordrach, in Baden Black Forest; and Davos. Finally, he indicates how the treatment has been modified to suit the exigencies of our own climate.

No special reference need be made to the other sections of the book. They all bear evidence of the careful manner in which the work of the year has been reviewed. We anticipate for this volume the same success which has attended its predecessors.

The Retrospect of Medicine. Edited by JAMES BRAITHWAITE, M.D.Lond., and E. F. TREVELYAN, M.D.Lond., B.Sc., M.R.C.P. Vol. 119 (January-June, 1899). London: Simpkin, Marshall, Hamilton, Kent & Co.

FOR the successful production of a book of this character the great necessity is long experience in the selection of what one might call the prize winners from the enormous masses of medical literature which accumulate in six months' time. The fact that Braithwaite's *Retrospect of Medicine* has reached its 119th volume is surely sufficient evidence, then, that the articles found therein are worthy of the careful attention of members of the medical profession.

Amongst the many other interesting extracts which show the scope of this book, the following may be mentioned:—Langwill on Hyperpyrexia in Rheumatism; Murray on the Treatment of Myxœdema; Whitla on Pneumonia; Caton on the Treatment of Valvular Heart Disease; Lindsay Steven on Profuse Hæmatemesis due to "Pore-like" Erosion of the Gastric Arteries; New Views of Pneumonia, from the *Medical Register;* and Cancer, as discussed in a special number of the *Practitioner.* Dr. Marsh's excellent article on Plague was published in the *Glasgow Medical Journal,* and not in the periodical to which acknowledgment is made.

In addition to the usual synopsis and index, there is a valuable general index for the preceding six volumes. The *Retrospect* shows no signs of decadence, and fully equals the standard set by its predecessors.

The Edinburgh Medical Journal. Edited by G. A. GIBSON, M.D., F.R.C.P. Ed. New Series, Vol. V. Edinburgh and London: Young J. Pentland. 1899.

THE *Edinburgh Medical Journal* continues to occupy and to deserve an honourable position among the monthly periodicals. The present volume contains 650 pages of what may fairly be described as excellent and valuable matter. The original articles, on which the judgment passed on a work of this kind must be based, number thirty-five, and the editor may well be gratified at the support he has obtained from medical authors. A considerable number of the contributors are outside of Edinburgh. The reviews, summaries of recent advances in medical science, &c., are worthy of the reputation of the work.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MEDICINE.

Enteric Fever in the American Army during the recent War.—A very interesting paper on this subject from the pen of Dr. Victor C. Vaughan, of Ann Arbor, Michigan, appears in the July number of the *American Journal of the Medical Sciences.* In August, 1898, Dr. Vaughan, together with Major Walter Reed, U.S.A., and Major E. O. Shakespeare, U.S.V., were instructed to study the causes and the spread of typhoid fever among the troops in the various camps within the United States. They therefore visited and inspected all the larger encampments in the States, devoting to this purpose six weeks' time, and endeavouring by direct personal observation to ascertain the conditions under which the soldiers lived. They visited nearly every regiment at each of these camps, made themselves acquainted with the water-supply, the quality and quantity of the food, the preparation of the food, the nature of the soil of the camp, the space alloted to regiments, the arrangement and size of the tents and the number of men occupying each tent, the location of sinks with reference to the mess tents, the disposition of fæcal matter and garbage, the thoroughness with which the camps were policed, &c. They visited regimental, division, and other hospitals, and ascertained the methods of disinfection practised in these hospitals. In short, they endeavoured to see for themselves everything that might have a bearing on the origin and spread of typhoid fever. While making this inspection they took the testimony of medical and other officers, and, so far as was possible, they interviewed at least one medical officer in each regiment.

Almost at the outset they encountered a serious difficulty in connection with the question of diagnosis. In the division hospital at Camp Alger they found most of the febrile cases diagnosed as malarial. They believed that they were typhoid fever, but the surgeons in charge had diagnosed them malarial. They requested that competent men, properly equipped for making blood examinations for the malarial plasmodium and the Widal test, should be sent to each of the larger camps. The Surgeon-General acted promptly on this suggestion. Drs. Gray and Carroll, of the Army Medical Museum, went to Camp Alger for this purpose. Subsequently Dr. Carroll continued this work at Jacksonville. Dr. Dock, of the University of Michigan, made investigations at Chickamauga, Knoxville, and Meade. Acting Assistant Surgeon Craig also spent several weeks in making blood examinations at Sternberg Hospital, Chickamauga Park. Dr. Curry, acting assistant surgeon at Fort Meyer, made many hundreds of blood examinations upon sick soldiers sent from Camp Alger, Jacksonville, and other camps. As a result of the work done by these men the commissioners are able to state that malaria was a very rare disease among those troops who remained in the United States. In the course of hundreds of blood examinations made on soldiers from Camp Alger, the plasmodium was not found. Dr. Dock found one case at Chickamauga and one at Meade. The one at Chickamauga was a private of the Second Arkansas Volunteer Infantry, who stated that he had had chills and fever at home in the spring of 1898 before he enlisted. The malarial case at Camp Meade belonged to one of the Pennsylvania regiments. Two weeks before the examination of the blood this man came, as he stated, from a camp on the banks of the Potomac. It will be seen, therefore, that in each of these cases the plasmodium was probably introduced into the system elsewhere than at one of the large camps.

Malaria was probably more frequent than these figures indicate, but that the long continued fevers diagnosed as malaria in nearly all the field hospitals were typhoid fever, there could be no doubt. The sick reports contained evidence in themselves that malaria was not a prevalent disease among the troops. The 158th Indiana, Sixth Ohio, and First West Virginia constituted at Chickamauga Park one brigade, and were encamped side by side. From the sick reports it appeared that malaria prevailed in the Indiana regiment from May throughout the summer. There were no cases in the Ohio regiment in May, 3 in June, 11 in July, 103 in August, and 203 in September. In the West Virginia regiment malaria did not appear on the records until August, when 108 cases were reported. That there should have been malaria in the Indiana regiment in May and not a case in either of the other regiments of the same brigade was not probable; and that it would have taken this disease two months, had Chickamauga been the fearfully malarious place it is said by some to be, progressing slowly through the Ohio regiment to reach the West Virginia regiment, was not in accord with any known epidemiological facts concerning this disease. Pushing the inquiry farther, it was found that in the Ohio regiment 273 individuals were recorded as having had malaria. Sixty-six of these were sick only a few days. Among those there might have been a few cases of malaria, but the probabilities were that even for these a diagnosis of febricula would have been quite as scientific. Of the 207 cases of protracted malaria, 148 were still sick when the last report consulted by the commissioners was made (31st October, 1898). This leaves 59 completed cases of malaria, among which there are quoted 12 deaths. A death-rate of more than 20 per cent in "mild, remittent malaria," as the disease was designated by one of the surgeons, is, to say the least, unexpectedly high.

Dr. Vaughan and his colleagues conclude that all the so-called protracted malarias were typhoid fever, and for this belief they give the following reasons :—

1. "The uneven distribution of the so-called malaria among regiments encamped side by side gives us cause to suspect that these were not malaria.

2. "Some of the surgeons who failed to record their cases as typhoid, state in their comments that typhoid fever prevailed in the regiment. One illustration of this may be of interest. From April to November there were in the Sixth Ohio, according to the recorded diagnoses in the monthly reports, only two cases of typhoid fever. Notwithstanding this fact, the acting assistant surgeon in charge at that time writes in the October report the following statement: 'The health of the command is improving. The prevailing disease that has caused the sickness we have had is typhoid fever.' And yet the September report showed only one case of typhoid fever, and the October report showed only one case, and this one case was one and the same patient carried from the August reports on to the reports for September and October.

3. "The results of several hundred blood examinations show that malaria was a very rare disease among the troops that remained in the United States.

4. "Malaria as it exists in this country is easily controlled by moderate doses of quinine. All the so-called protracted malarias in our camps were treated with large doses of quinine, and were not improved thereby. Consequently, we must conclude that the diagnosis given in these cases was erroneous.

5. "The mortality of the so-called protracted malarias corresponds with the mortality of typhoid fever, and furnishes most positive proof that these cases were not malarial.

"When we began," the commissioners proceed, "to study the regimental sick reports, we found that, in order to obtain satisfactory information, we must ascertain how many cases of typhoid fever there were in each regiment, and it soon became evident that the regimental sick reports did not give this information. Of two regiments in the same brigade, one had more than 200 cases of recognised typhoid fever, as shown by the regimental reports, while the other regiment on like evidence had only two cases; but the records of the second regiment showed more than 200 cases of protracted malaria, and these furnished a mortality as high as that of the typhoid fever in the first regiment. For the reasons already given, we have included all the protracted malarias among our list of the typhoids. It may be asked how long we have considered it necessary for a so-called malaria to run in order to make it a probable typhoid. In answer to this I will state that we have regarded all so-called malarias of ten days or more in duration as possible cases of typhoid fever. We think that the great rarity of true malaria and the readiness with which these rare cases have yielded to quinine, and the fact that quinine was so generally administered, justify us in this conclusion. Practically, however, the number of doubtful cases is exceedingly small."

Typhoid fever was hidden under many other names besides malaria. Thus, in one regiment the death-rate from "prolonged indigestion" amounted to 15 per cent, and in another regiment a disease which the commissioners regard as having been without doubt typhoid fever was frequently diagnosed as dengue, though this did not prevail among the remainder of the 60,000 troops at the same place.

The origin of typhoid in all the larger encampments was easily determined. Many of the volunteer regiments, and some of the regulars, were infected before they reached the national camps. Thus, the Sixth Ohio reached Chickamauga Park on 18th May with a case of recognised typhoid fever. This patient was kept in the regimental hospital until he died, 24th May. The Ninth New York arrived at Chickamauga 25th May. There was a suspiciously prolonged case of diarrhœa on 10th June, and one of enteric fever three days later. The Thirty-first Michigan arrived 17th May, and furnished a recognised case of typhoid fever on 1st June. The First Arkansas reached Chickamauga 27th May, and sent a probable typhoid case to the division hospital 2nd June, and a recognised case of typhoid fever 3rd June. The Fifty-second Iowa came 31st May, and the surgeon recognised a case of typhoid fever 8th June. The First Missouri went into camp at Chickamauga 21st May, and had a suspicious case 31st May. The Fifth Missouri came 27th May, and furnished a suspicious case 6th June. The Second Kentucky arrived 26th May, and, so far as the records show, had no typhoid fever until 26th June. The Second Missouri arrived 20th May, and furnished a probable case 26th May. The Twelfth New York came 20th May, and the first suspected case had its initial date ten days later. The First New Hampshire arrived 22nd May, and two days later entered on its sick report a case that was most probably typhoid fever. The Eighth New York arrived 25th May, and did not show any evidence of the existence of typhoid fever until 24th June. However, as this patient died 1st July, it was probable that the true initial date was earlier than that indicated. The Second Ohio arrived 18th May, and two days later a case diagnosed as "gastro-enteritis," and which might have been typhoid fever, was treated in the regimental hospital.

The commissioners consider it safe to say that "more than 90 per cent of the volunteer regiments that went to Chickamauga Park reached that place infected with typhoid fever. So wide-spread is typhoid fever in this country that in assembling a regiment of volunteers the probabilities are that one or more men in the regiment will be found to be infected with this disease at the time of enlistment. Medical officers might do well to bear this in mind, and be on their guard for the detection of the first case of typhoid fever. Instead of doing this, many medical officers will refuse to recognise typhoid fever until it assumes epidemic proportions, and the records that we have studied show us that often when typhoid fever has become an epidemic some medical officers still refuse to give the disease its right name, and prefer to call it something else. This aversion to calling typhoid fever by its right name seems to exist among medical officers in all armies. The German medical officer often calls the disease 'gastric fever,' and this term appears now and then in our records when the surgeon happens to be a German. The French call it 'manœuvre fever.' I am inclined to the opinion that medical officers often are led to suppress the diagnosis of typhoid fever for fear of the alarm it will give the patient and others. This, however, is a mistake. We will not eradicate this disease from our camps unless we early recognise its presence, and take proper steps to prevent its spread."

"It may be well to emphasise the fact that our troops frequently carried in their own persons the typhoid infection to the national encampment. Some acquired the disease at the State encampments, and others brought it directly from their homes. In one of the Alabama regiments typhoid fever was at first confined to one company, and this company came from a town where there was an epidemic of the disease at the time when the men enlisted. From this company the disease spread through the regiment."

The next question was—How did typhoid fever spread among the troops? The commissioners naturally turned their attention in the first place to the drinking water, but here their results were in the main negative. At Jacksonville the general water supply to all the regiments was from artesian wells a thousand feet deep, and infection of this water seemed well-nigh impossible. Moreover, in round numbers, there were at Jacksonville last August and September 30,000 soldiers and about the same number of residents. Soldiers and citizens used the same drinking water, and yet there was a wide-spread epidemic of typhoid fever among the soldiers and only a few sporadic cases among the citizens. At Knoxville the soldiers and citizens used drinking water from the same source, and at the time of the inspection (September, 1898) there were hundreds of cases of typhoid fever among the soldiers, and the records of the health officer of the city showed no evidence of the existence of the disease among the citizens. Some of the regiments at Chickamauga drank water from the creek, which might have been contaminated. These regiments suffered from typhoid fever, but other regiments which had no water from Chickamauga Creek, and which brought their supply a long distance from mountain springs, the contamination of which was highly improbable, had typhoid fever just as badly as did those who drank water from Chickamauga Creek. There was another very interesting point in this connection. The three regiments of a brigade were encamped side by side; water from the same pipes was distributed alike to all these regiments; and yet typhoid fever became epidemic in one of these regiments, while one of the others remained, for weeks at least, wholly free from the disease. A similar condition was observed in the distribution of the disease among the companies in a regiment.

There was some evidence of water infection at some of the smaller camps—possibly through soldiers while off duty and out of camp drinking from infected wells.

The spread of typhoid fever will depend upon the disposition of the excretions of those infected. On this point the commissioners have some interesting information:—

"The first division of the Seventh Army Corps had during its stay at Jacksonville water carriage for its fæcal matter. Each company was supplied with a galvanized iron trough, the lower end of which was connected with the sewer. The connection between the trough and sewer was closed by a cylindrical plug, which could be raised whenever it was desired to discharge the contents of the trough. The other end of the trough was connected with the water hydrant. The trough was partially filled with water, and in this condition received the excrement. The contents of the trough were discharged at will.

"The second division of the same army corps was furnished with tubs or half-barrels. The fæcal matter and urine were received in this without the addition of lime, dirt, or anything else. When these tubs were filled they were carted away by scavengers, emptied, cleaned, and returned. The fæcal matter in the tubs was always exposed to flies; the contents were often spilled about the camp, and slopped out along the road.

"The third division disposed of its fæcal matter in pits, as is ordinarily done in camps. Orders were issued that the contents of the pits should be covered once, twice, or three times a day, differing in the different regiments.

In some regiments attempts were made to compel each individual to cover his stool as soon as deposited.

"It will thus be seen that in the three divisions there were three distinct methods of disposing of fæcal matter. The men in these divisions were supplied with the same water and the same rations, lived in the same kind of tents and in the same climate; in fact, the only difference was in the method of disposing of the fæcal matter. In August and September there were more cases of typhoid fever in one regiment of the second division than in all the six regiments then constituting the first division, while the third division furnished an intermediate number. It will thus be seen that when the fæces were swept out of camp with a minimum possibility of camp contamination typhoid fever was less prevalent.

"The most potent factor in the spread of typhoid fever at most of the camps was camp pollution with infected fæcal matter. This was true at both the large and small encampments. It was equally true of the smaller State camps, usually of one regiment, in the Northern States, and the large national encampments of one or more corps in the South. The Fifteenth Minnesota at St. Paul and Fort Snelling, the Thirty-fifth Michigan at Island Lake, and the 203rd New York at Camp Black became quite as badly infected as did any of the regiments at Chickamauga, Jacksonville, or Camp Alger. The epidemic of typhoid fever was not due to sending Northern men to Southern camps, nor was it due to the massing of many regiments together; but it was due to camp pollution. In most of the camps fæcal matter was deposited in pits. Flies swarmed over the infected fæcal matter, and then walked over the food at the mess-tents. In many of the regimental camps fæcal matter was deposited about the camp on the ground. There were pieces of woodland at Chickamauga Park through which one could not walk without soiling his shoes with fæcal matter. In some of the regimental camps at Tampa the sinks were overflowed by the rains, and fæcal matter floated through the companies' streets. In many regiments, paper soiled with fæcal matter was blown about the camp. In a few instances it happened that, when a regiment was compelled to occupy a site vacated by another regiment, in digging the the sinks for the newly arrived command, the men found themselves in the filled sinks of the regiment that first occupied the ground. In at least one company, a New York regiment, a small cesspool was dug in front of each tent, and this received the wash-water and probably at night the urine. In one of the Pennsylvania regiments, the men of one company dug a shallow well for drinking water in a location where the water was in all probability contaminated, and this company had an unusually large number of cases of typhoid fever. At Chickamauga a soldier was found attempting to run the guard by getting into one of the barrels on the waggon on its way to the spring to bring drinking water for the regiment. We walked through the regimental camp to which this soldier belonged, and we can testify to the fact that, although we picked our way, the soles of our shoes were soiled with fæcal matter before we finished the round of inspection. In this way men carried fæcal matter into their tents; and clothing, blankets, and tentage undoubtedly became infected in many instances. These are some of the ways in which the infection of typhoid fever was spread."

No evidence was discovered to show that milk was a general or frequent vehicle of infection.

Dr. Vaughan and his colleagues recommend that, when water carriage cannot be obtained for the complete removal of excreta, the latter must be completely sterilised if the spread of enteric in camps is to be prevented. They recommend for this purpose that each company be furnished with a specially constructed, galvanised iron trough. The trough should be partly filled with a saturated solution of milk of lime, and should be emptied every day by an odourless excavator. One excavator would serve a brigade.

So far as the commissioners can estimate, the death-rate among the enteric cases in twelve regiments at Chickamauga amounted to something between 4 and 7 per cent.

The quotations that have already been given from Dr. Vaughan's paper strongly suggest that the skill of the United States Army Medical Staff is not all that could be desired. Other facts quoted corroborate this view. The commissioners went to work with the preconceived notion that diarrhœa and other intestinal disorders rendered men more susceptible to enteric, and they therefore anticipated that typhoid would prevail especially among those who had suffered from some intestinal disorder. In this, however, they found themselves mistaken. For instance, in one regiment, 543 persons who had intestinal disorder furnished 40 cases of typhoid—1 to 13·7; while 765 persons who had no intestinal disorder furnished 211 cases of typhoid—1 to 3·6. Dr. Vaughan concludes that many of the diarrhœas must have been due to or accompanied by typhoid infection.

The commissioners found that typhoid fever was often far advanced before it was observed, a condition of affairs that must greatly favour the spread of the disease in camps. Thus, many cases sent from the Eighth New York regiment to New York hospitals were found to be convalescing from typhoid when they reached hospital, the disease having been previously diagnosed as malarial fever.

Other conclusions arrived at by Dr. Vaughan and his colleagues are these:—

(*a*) A regiment thoroughly infected with typhoid fever does not lose the disease when it changes its locality, even when it goes to a perfectly unobjectionable site and leaves all its sick behind. It is altogether probable that the clothing, blankets, and tentage of the men become thoroughly infected with the typhoid bacillus.

(*b*) If a regiment be moved before the infection has become marked, typhoid fever may disappear, or at least decrease.

(*c*) A sea voyage of some days or weeks may apparently rid a command of the disease if the infection is not very thorough.

(*d*) A regiment thoroughly infected with typhoid fever does not lose the disease or lessen the number of cases after a short voyage at sea.—T. K. M.

Books, Pamphlets, &c., Received.

Golden Rules of Psychiatry, by James Shaw, M.D. Bristol: John Wright & Co. 1899. (1s.)

Enlargement of the Prostate: Its Treatment and Radical Cure, by C. Mansell Moullin, M.D., F.R.C.S. Second Edition. London: H. K. Lewis. 1899. (6s.)

Atlas of Urinary Sediments, with Special Reference to their Clinical Significance, by Dr. Hermann Rieder; Translated by Frederick Craven Moore, M.Sc., M.D.; Edited and Annotated by A. Sheridan Delépine, M.B., C.M., B.Sc. With 36 Plates comprising 167 Figures (many in Colours), and several Figures in the Text. London: Charles Griffin & Co., Limited. 1899. (18s.)

Skiagraphic Atlas of Fractures and Dislocations, with Notes on Treatment for the Use of Students, by Donald J. Mackintosh, M.B. London: H. K. Lewis. 1899. (12s. 6d. net.)

On the Physiological Perception of Musical Tone (being the Seventh Robert Boyle Lecture delivered before the Oxford University Junior Scientific Club on 6th June, 1899), by John Gray M'Kendrick, M.D., LL.D., F.R.C.S. London: Henry Frowde. 1899. (1s. net.)

Asthma: Recent Developments in its Treatment, by Ernest Kingscote, M.B., C.M. With Coloured Frontispiece and Illustrations. London: Henry J. Glaisher. 1899. (5s. net.)

County of Lanark: Eighth Annual Report upon the Health and Sanitary Conditions of the County (1898), by John T. Wilson, M.D., D.P.H. Glasgow: Robert Anderson.

King's College Hospital Reports. Vol. V (1st October, 1897—30th September, 1898). London: Adlard & Son. 1899. (7s. 6d.)

Archives of Neurology and Psychopathology. Vol. I, No. 4. Utica, N.Y.: The State Hospitals Press. 1899. (Issued Quarterly, 3 dols. per vol.)

Annual Report of the Medical Officer of Health of the City of Glasgow (1898). Glasgow: Robert Anderson. 1899.

Twenty-Ninth Annual Report of the Operations of the Sanitary Department of the City of Glasgow, for the Year ending 31st December, 1898, by Peter Fyfe, F.R.S.E. Glasgow: Robert Anderson. 1899.

The Pathology of Emotions: Physiological and Clinical Studies, by Ch. Féré; Rendered into English by Robert Park, M.D. London: The University Press. 1899. (15s.)

The Universal Illusion of Free Will and Criminal Responsibility, by A. Hamon. London: The University Press. 1899. (3s. 6d.)

Darwin on Trial at the Old Bailey, by Democritus. London: The University Press. 19... (2s.)

A Dictionary of Terms used in Medicine and the Collateral Sciences, by the late Richard D. Hoblyn, M.A. Oxon. Thirteenth Edition, Revised throughout, with numerous Additions, by John A. P. Price, B.A., M.D. Oxon. London: Whittaker & Co. 1899. (10s. 6d.)

Orthopædic Surgery: a Text-book of the Pathology and Treatment of Deformities, by J. Jackson Clarke, M.B. Lond. With 309 Illustrations. London: Cassell & Co., Limited. 1899. (21s.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 19TH AUGUST, 1899.

	Week ending			
	July 29.	Aug. 5.	Aug. 12.	Aug. 19.
Mean temperature, . .	59·7°	63·3°	58·5°	60·9°
Mean range of temperature between day and night, .	11·5°	19·2°	19·9°	16·9°
Number of days on which rain fell, ...	4	...	1	4
Amount of rainfall, . ins.	0·53	...	0·28	0·22
Deaths registered, ...	279	289	278	300
Death-rates, ...	19·8	20·5	19·7	21·3
Zymotic death-rates, . .	5·1	4·3	4·4	6·5
Pulmonary death-rates, .	4·5	4·2	3·5	3·0
DEATHS—				
Under 1 year, ...	82	88	71	107
60 years and upwards, .	40	53	49	41
DEATHS FROM—				
Small-pox, ...	...	...	...	...
Measles, ...	15	8	12	16
Scarlet fever, ...	1	3	3	4
Diphtheria, ...	2	1	1	1
Whooping-cough, . .	7	4	4	6
Fever, ...	4	6	3	1
Diarrhœa, ...	42	38	39	64
Croup and laryngitis, .	...	1	...	2
Bronchitis, pneumonia, and pleurisy, . . .	39	32	23	18
CASES REPORTED—				
Small-pox, ...	...	...	...	...
Diphtheria and membranous croup, ...	2	5	9	10
Erysipelas, ...	12	19	21	22
Scarlet fever, ...	62	65	89	119
Typhus fever, ...	1	...	...	...
Enteric fever, ...	30	17	23	43
Continued fever, . . .	...	...	...	...
Puerperal fever, . . .	1	2	1	2
Measles,*	148	160	88	100

* Measles is not notifiable.

SANITARY DEPARTMENT,
GLASGOW, *24th August, 1899.*

THE

GLASGOW MEDICAL JOURNAL.

No. IV. October, 1899.

ORIGINAL ARTICLES.

A RARE MEDICAL BOOK, AND ITS AUTHOR.

By HENRY E. CLARK, M.R.C.S.Eng.,
Professor of Surgery, St. Mungo's College, Glasgow.

Some years ago a student presented me with an old book which he had picked up for a few pence at a bookstall. It is a fat duodecimo of 431 pages, bound in brown calf, in a bad state of preservation, and many of the pages are much worm-eaten. The title-page of it runs thus:—

Supplementum Chirurgiæ | or the | Supplement | To the | Marrow | of | Chyrurgerie. | Wherein | Is contained Fevers, Simple and | Compound, Pestilential, and not, | Rickets, Small-Pox and Mea- | sles, with their Definitions, Causes, | Signes, Prognosticks, and Cures, | both general and particular. | As also | The Military Chest, containing all necessary | Medicaments, fit for Sea, or Land-Service, | whether Simples or Compounds, such as | purge, and those that do not; with their se- | veral vertues, doses, note of goodness, &c., | as also Instruments. | *Amongst which are many Approved* Receipts | *for several diseases.* | By James Cooke, Practition- | er in *Physick*, and *Chirurgery.* | London, Printed for *John Sherley*, at the | *Golden Pelican* in *Little Britain.* 1655.

James Cooke, of Warwick, was a well-known and successful practitioner and writer in the middle of the seventeenth century. His *Mellificium Chirurgiæ*, or "Marrow of Surgery," was a very popular text-book of medicine, which passed through many editions, and appears to have taken the place of Peter Lowe's *Discourse of the Whole Art of Chirurgerie* in England, if not in Scotland. Copies of it are not very rare, almost every medical library of importance possessing one or more. The copy in the library of the Glasgow Faculty of Physicians and Surgeons appears to be the first, and is dated 1648.[1] The *Supplementum Chirurgiæ*, on the other hand, is extremely rare, and I have only been able to find it mentioned in the catalogue of the library of the British Museum, which possesses two copies. It is mentioned in Dr. Robert Watt's marvellous compilation, the *Bibliotheca Britannica*, and furnishes thus another testimony to the accuracy and completeness of that work.[2]

The "Supplement" is of the same size and is printed and bound in the same manner as the "Marrow," to which it is obviously a companion volume. Dr. Alex. Duncan suggests that the greater rarity of the "Supplement" is probably explained by there being only one edition of it; he thinks it probable that the subject matter would be incorporated with all later editions of the "Marrow." This conjecture is exceedingly probable, but I have up to the present been unable to verify it.

James Cooke, of Warwick, the author of the "Marrow" and "Supplement," was a notable man in his time, and there are several facts in his history sufficiently important to be worth recalling. He was born in 1614, and died in 1688; he thus lived at one of the most critical periods of English history, and was in the prime of his life and at the height of his powers during the strain and stress of the Civil War. He appears to have been a very successful practitioner, and to have had an extensive practice, for he speaks of having cured many of rickets in "Northamptonshire, Nottinghamshire, and Warwickshire" with a certain prescription which he gives in the "Supplement." His practice was chiefly among the nobility and gentry of the midlands, and he states that, "Being commanded by the Lady Dowager Brooke to wait on her to London, to take the consult of physicians, in the way before we came to Tossiter" (Towcester, in Northamptonshire) "we met with the tydings of that fatal fire of London, which caused her honour to resolve for Hackney." This was in 1666, when Cooke was 52 years of age.

---

[1] The last edition seems to have been the sixth, dated 1717.

[2] I shall esteem it a favour if readers will furnish me with any other notices of the *Supplementum*, and inform me of other copies than those I have mentioned, if such exist.

He was a skilful obstetrician; and his works show him to have been a keen observer and a man of sound sense and discretion. His patron, Lord Brooke, was an enthusiastic supporter of the Parliamentary party, and there is every probability that Cooke was also a Roundhead. It thus came about that he remained undisturbed in the practice of his profession in spite of the Civil War, for he belonged to the dominant party, and was, besides, under the protection of the most powerful noble of the district.

In 1642 he was in attendance on the Parliamentary army at Stratford-on-Avon, and was so fortunate as to purchase some manuscripts and books from Mistress Susannah Hall, Shakespeare's eldest daughter, and widow of Dr. John Hall. He records the transaction in the following terms:—"Being, in my art, an attendant to parts of some regiments to keep the pass at the bridge of Stratford-on-Avon, there being then with me a mate allyed to the gentleman that writ the following observations in Latin, he invited me to the house of Mrs. Hall, wife to the deceased, to see the books left by Mr. Hall. After the view of them, she told me she had some books left, by one that professed physick, with her husband for some money. I told her, if I liked them, I would give her the money again. She brought them forth, among which was this,[1] with another of the author's, both intended for the presse. I, being acquainted with Mr. Hall's hand, told her that one or two of them were her husband's, and shewed them to her. She denyed; I affirmed, till I perceived she began to be offended. At last I returned her the money." Mr. Sidney Lee, in his interesting and generally accurate little book about Stratford-on-Avon,[2] falls into the curious error of assuming that she did not sell them to Cooke:—"He informed her that some manuscripts of her husband were among them, and offered to buy them off her, *but she declined*, and disputed his opinion as to the authorship of the papers." Had Mr. Lee turned up the catalogue of any good medical library, he would have discovered that a translation into English of one of the manuscripts purchased (it was written in Latin) was published by Cooke in the year 1657 under the title of "Select Observations of English Bodies; or Cases both Empiricall and Historicall performed upon very Eminent Persons in Desperate Diseases. First written in Latin by Mr. John Hall, physician, living at Stratford-on-Avon in Warwickshire, where he was very famous, as also in the countries adjacent, as appears by these Observations drawn out of severall hundreds of his choicest."[1]

---

[1] The "Select Observations" mentioned below.

[2] *Stratford-on-Avon, from the Earliest Times to the Death of Shakespeare.* By Sidney Lee. With forty-five illustrations by Edward Hull. London: Seeley & Co. 1890.

The interview between Shakespeare's daughter and the author of the "Marrow of Chirurgerie" presents several interesting features. We may assume (without any great stress of the imagination) that the "mate allyed" to Dr. Hall, who introduced Cooke, was Thomas Quiney, the husband of Judith Shakespeare, the younger daughter of the poet. He kept a vintner's shop, called "The Cage," in Bridge Street, Stratford—the street leading down to the bridge which the Parliamentary troops were engaged in guarding—and his shop would no doubt be a place of resort for the officers commanding the troops. It seems incredible that Mrs. Hall should not know her husband's writing, and that Cooke should be better informed than she was in the matter. But he undoubtedly proved to be in the right, for the work as published by him shows indubitable evidences as to Dr. Hall's authorship. We can only understand her ignorance if we remember that, though she is described on her monument as "witty above her sex," and "wise to salvation," she probably could neither read nor write. Several authors who have commented on Cooke's interview with Mrs. Hall have conjectured that among the MSS. handed over there might have been some writings of Shakespeare's, perchance an unpublished play, or another volume of sonnets. It must be allowed to be inherently improbable that Cooke would have made away with any plays or poems, if such existed in manuscript. Though nominally a Roundhead, he does not appear to have been wanting in intelligence or breadth of view, and his publication of Dr. Hall's "Observations," as well as what little we know of him otherwise, convinces us that he was a keen man of business, and would not be likely to overlook the value which any writing of Shakespeare even then had.

Cooke lived an active, useful, and, I have little doubt, a happy life. Born in the reign of James I, he passed through the reign of Charles I (relatively long although cut short by a tragic ending), was active in the time of the Commonwealth, did his duty as a physician and a citizen in the lax times of Charles II, saw the brief and disturbed rule of James II, and only passed away just as the greatest revolution the British nation has known was so quietly and effectively accomplished.

---

[1] In the *Life of Shakespeare* recently published, Mr. Lee refers (in a footnote) to Dr. Hall's "Select Observations;" he has thus probably found out his error.

A worthy example of the old world practitioner, whose trained observation and sound commonsense had to make up for defects in scientific knowledge. His faith in medicines was great, and it would comfort many a physician nowadays had he like confidence in such a remedy as "shavings of hartshorne," of which Cooke says, "It is cordial, resisting venom, cleareth the heart, dispelleth winde, easeth collick, opens obstructions, killeth wormes, helps the jaundice, easeth pains in the reines and bladder, drives forth the small-pox and measles."

"There are two likenesses of Cooke, one at the age of 64 in the 1679 edition of the 'Select Observations,' and one when 71 in the 1685 edition of the 'Marrow of Chirurgerie.' He had a fine head, with large but regular features, a slight moustache, and long hair."[1]

He died in 1688, and was buried in St. Mary's Church, Warwick. My enquiries as to any monument to his memory in that church have had a negative result. As the church was burned to the ground in 1694, many of the monuments perished in the fire, and it is probable that if there was a memorial to Cooke it was thus destroyed.

Mr. S. Timmins, the author of a history of Warwickshire,[2] mentions in that work that Cooke, in addition to the "Marrow of Chirurgerie," wrote also another work called the "Marrow of Physic." This is clearly an error, no independent work of that name having been published by Cooke, but the words "Marrow of Physic" form part of the sub-title of several of the later editions of the "Marrow of Chirurgerie.

The *Supplementum Chirurgiæ* treats of simple, intermittent, and putrid fevers; of rickets, small-pox, and measles; and the latter half is occupied by an enumeration of the various drugs, plasters, dressings, and instruments which should be contained in a "Military Chest," with particulars as to how they should be employed. The section on rickets is of especial interest as being one of the earliest descriptions of the disease in the English language. Glisson's treatise, which especially drew attention to the condition, was published in 1650, but Cooke claims to have seen a description of it long before that date, but he does not say who the author was. "This disease is," he says, "as new; so, as peculiar to children; it hath received several names, as *Pædesplanch nosteocaces*, this I saw in Print, in a Thesis long before the *Doctor's Tract* on the subject;

---

[1] Dr. Aveling, in the first volume of the *Obstetrical Journal*, 1873, p. 449.

[2] *Popular County Histories: A History of Warwickshire*, by Sam. Timmins, F.S.A. London: Elliott Stock & Co. 1889.

others *Cachexia Scorbutica*, and Doctor's; the *Rachitis*, nearly bordering on the vulgar name *Rickets*, and signifying the spinal disease, the spine being the first and principal, amongst the parts affected in this evil." In these descriptions the "Doctor" is evidently Glisson, whose "tract" was much talked of at the time that Cooke wrote.

The description of the signs of rickets would do no discredit to a modern text-book, and it would be difficult to add much to its completeness. In the matter of etiology Cooke had very definite views, but these did not include any suggestion as to the chemical qualities of the drinking-water. He gives the following as the causes:—"1. A week and sickly constitution. 2. Diseases of one or more parents, as cold and moist distemper, ill-habit, cachexy, dropsy, atrophy, &c. 2." (his numbers have here got astray) "Slothfulnesse, effeminacy, idle life of the parents. 3. Errors of the mother during her being with childe. 4. Debility of the new-born infant, if it be not from hard labour, with many others." It will be observed that Cooke's practice lay chiefly among the well-to-do, in a part of the country where there were no large cities, where fresh air was plentiful, and the drinking-water not unduly soft. It may be admitted, however, that sanitation was totally neglected and ventilation almost unknown, and while the towns were not large, the overcrowding in parts of them was as grave and even more disgraceful than at present.

The remedy which he vaunts as so successful was the following curious herbal concoction:—"Ceterach, maidenhaire each Mj, Scurvygrasse, Tamarisk, each Ms, Harts-tongue, liverwort, Mijs, China sliced two spoonfuls, anise-seeds, liquorish, each ℥i, shavings of ivory, and harts-horne, each ʒvi, boil them all in three gallons of new midling-wort to the consumption of the third part, after strain it, barme it up, after it is ready drink of it morning, at four o'clock in the afternoon, and in the night if drink be called for, yea, at all times." It was thus a fermented herb-beer, which might be taken as a beverage at any time.

Cooke describes measles and small-pox in the same chapter, and mixes them up in a very confusing manner. But he is quite logical in so mixing them if his theory of their causation be accepted. "*Cause internal*," he says, "is the impurities of the mother's blood, which the infant in the womb draws in in the last moneths, the purer being not sufficient, this being attracted into the whole fleshie substance, is then hid insensibly for some years, yea some time many. Now when nature cannot any longer suffer these impurities, it begins by ebullition to foment them like new must. By that ebullition the pure is separated from the impure, the impure by a certain *crisis* is thrust out, and the heat communicated to the heart kindles a Feaver. This is to be *observed* there 's found in the masse of the blood a double excrement, the one thick the other thin; of the first is generated the *pox*, of the second *measles;* although they are both infected by one and the same ill quality."

The book contains many marvels to which I cannot further allude. What, for instance, would I not have given years ago to have known that *man's fat* "smooths cicatrices and scars after pox"! But, alas! the knowledge comes too late. Perhaps our successors 250 years after this may in like manner scoff at our faith in extracts of thyroid, testicle, and brain matter!

Even the page and a quarter of advertisments are not without interest, for we have the announcement of Mr. John Milton's pamphlet on "Prelatical Episcopacy," of the "Translation of Virgil into English Meter" by Henry, Earl of Surrey, and, what is still more exciting, "Dr. Moyes' Relation of the Serpent found in the heart of *Jo. Pennant*, in which many curious questions concerning occult diseases are discussed."

The book will be given by me to the Faculty of Physicians and Surgeons as a small addition to their valuable library.

CLINICAL GYNÆCOLOGY.

By J. K. KELLY, M.D.,
Physician for Diseases of Women, Glasgow Royal Infirmary;
Lecturer on Gnyæcology, St. Mungo's College.

It is proposed in the following series of papers to report cases occurring chiefly in the gynæcological department of Glasgow Royal Infirmary. It is impossible within the space which the Editors can allot to the writer to give reports of all the cases that occur there. Were this possible, and were the reports such as one could desire them to be, they would form a sort of ideal clinical gynæcology, there being no case, even apparently the most trivial, without its own instructive and interesting features, or without some bearing on other cases. We must be content, however, to come very far short of this ideal, and must limit our attempt to the giving of illustrative cases.

The reader will understand that these are merely clinical papers, and that no attempt will be made in them at a systematic discussion of either diagnosis, pathology, or treatment, while, naturally, they will supply a certain amount of material for such a discussion. So far as they are not mere reports they will rather resemble the remarks the surgeon makes at the bedside, and which are suggestive rather than exhaustive.

CASE I.—*Pelvic abscess of uncertain origin and unusual seat.*

C. M'K., æt. 17, farm servant, admitted 10th June, 1899, began menstruating at 16, was regular every four weeks, but discharge was profuse, usually lasting about eight days.

Report on admission.—Since December, 1898, patient has complained of pain in the right iliac region, which has been getting much worse of late. She thinks it came on after getting her feet wet. About two days after the onset of the pain menstruation came on, the discharge being very profuse and accompanied by clots, the pain being very severe at that time. Since that time menstruation has been irregular, coming on at longer intervals, the pain being very severe during the flow. The last menstrual period occurred five weeks before admission, was very profuse, and lasted eight days; this was followed by a pinkish discharge, and then by a yellowish-white, very fœtid in odour. Several times during the last five weeks patient has noticed this fœtid discharge coming away in large quantities at a time. After these discharges she feels relieved for a time. About a week ago she had great pain on micturition with frequency, having to get up during the night to pass urine. At no other time has she suffered from these symptoms, nor can she account in any way for the symptoms above noted.

During the night after admission there was a profuse discharge of fœtid pus from the vagina, in quantity sufficient to flood the bed.

Examination on 11th June revealed tenderness and a feeling of resistance on palpation over the right iliac region of the abdomen, and, *per vaginam*, the anterior vaginal wall was found bulged down by a fluid collection between bladder and uterus. The cervix was displaced posteriorly and to the right side, almost out of reach. Greyish fœtid pus was present in the vagina, but no opening could be either seen or felt.

On 12th June, under chloroform, an incision was made in the middle line about the centre of the anterior vaginal wall; a large quantity of fœtid pus escaped. The interior of the pus sac was found to pass round to the right of, and behind, the uterus. This was thoroughly washed out with weak carbolic solution, a drainage-tube introduced, and vagina packed with gauze.

Healing followed without accident, and on 23rd June patient went home well.

This case is noteworthy in several respects—

1. The situation of the abscess was unusual. Its original site was probably in the utero-vesical connective tissue, but from this it had burrowed round through the loose cellular tissue in the inner part of the right broad ligament into the posterior parametrium. It showed no tendency to follow the usual course of pus in the parametrium outwards between the layers of the broad ligament to the pelvic wall.

Pelvic abscess, as distinguished from pyosalpinx, is usually an accident of the puerperal period when the connective tissue between the layers of the broad ligament is still both voluminous and lax, and presents little mechanical resistance to the passage of fluid, and little vital resistance to the invasion of infective bacteria. In each case, accordingly, the pus travels outwards towards the pelvic wall. But in the pelvis of a nullipara, such as our patient, the connective tissue may be supposed to present these resistances in the fullest degree, and in the present case may have limited the pus to the immediate neighbourhood of the uterus.

2. The cause was obscure. The patient blamed a wetting of the feet just before the occurrence of a menstrual period, but, while such a cause might account for a uterine or tubal catarrh, it is very unlikely as a cause of pelvic suppuration. My impression was that there must have originally been some infected wound of the anterior vaginal wall, such as could be produced in masturbation. But the patient denied having hurt herself or having been hurt in any way, though the hymen was not intact.

3. The local abscess had very little influence upon the general health. On admission the temperature was 100°, and rose to 100·6° on the evening before operation. There was no suggestion of septic poisoning. The patient presented none of the aspect of a person suffering from a chronic suppuration.

Patients suffering from puerperal abscess are, as a rule, pallid and exhausted, and give the impression of severe and long continued suffering, but this patient was fresh coloured and active, and showed no signs of invalidism.

As illustrating the usual causation, locality, and course of a pelvic abscess, we may take the following case:—

CASE II.—*Ordinary puerperal abscess approaching the surface near Poupart's ligament.*

Mrs. C., æt. 28, iv-para, last two months ago, admitted 13th April, 1898.

Report on admission.—Patient dates her present illness from her last confinement, two months ago. She lay in bed for eight days after she was confined, and during this time had some shivering and sweating, but did not feel very ill. On the 8th she got up and did a washing, and on the same day took a severe rigor and pain in the left side. The lochial discharge continued red for a month, and for a fortnight afterwards there was a white discharge. At present patient states there is no discharge. She has been confined to bed till the time of admission. She had pain after micturition till about eight days ago. During her illness she has markedly lost flesh. For the last month she has had no rigors. The left thigh is flexed on the abdomen, and can be straightened only to a slight extent.

Patient is very thin, and looks much older than her years. The abdomen is flat, except in the left iliac region, where a rounded prominence runs parallel to Poupart's ligament, presenting fluctuation in its most prominent part, where also is the greatest tenderness. *Per vaginam*, the left fornix is occupied by a strong, hard, immovable mass. Uterus is subinvoluted, but otherwise normal.

On the day after admission, 14th April, the abscess was opened by incision above Poupart's ligament, pus cavity washed out thoroughly with carbolic solution, and a drainage-tube left in.

Healing went on without accident, and on 19th April the patient went home.

In this case we have a puerperal abscess expressed, as it were, in its simplest terms. Originating from an infected cervix, it passed along the connective tissue of the broad ligament, reached the lateral pelvic wall, was thence diverted upwards and forwards to the sub-peritoneal connective tissue of the anterior abdominal wall above Poupart's ligament where it approached the surface.

Similar to this are the favourable, and, happily, the most frequent, cases. But the pus sometimes reaches the surface only after strangely devious courses. I remember being impressed by this fact in the early years of my practice in the case of a primipara who suffered from severe puerperal inflammation. After an illness of some months the "pelvic" abscess pointed behind the angle of the left scapula!

Among recent examples the following cases are interesting:—

CASE III.—*Puerperal abscess, pelvic in origin, approaching the surface in the lumbar region.*

Mrs. H., æt. 35, viii-para, admitted 2nd May, 1898.

Report on admission.—Patient dates the onset of her present illness from the birth of her last child on 26th March, when she developed inflammation on the 28th, caused by a chill. The lochial discharge stopped on this date, and did not return. The inflammation was followed by puerperal fever, when patient complained of severe rigors and profuse perspirations, accompanied by very severe pain in the left side, sometimes shooting down the left leg. This pain has been present ever since, patient being confined to bed up till admission. The pain was so severe two days ago that she had to get morphia from her doctor to allay it.

Patient has always been a very healthy woman. She has had two miscarriages—one sixteen years ago, of which she assigns a fall as the cause; the other was twelve years ago, cause unknown.

Patient is pale, with rather a sallow complexion. Mucous membrane pale. Tongue coated with thick white fur. Temperature, 100·6°. The abdomen is slightly distended. It is tympanitic to percussion all over, but in the left iliac fossa the note is much flatter. In this region a distinct sense of resistance can be made out running from Poupart's ligament obliquely upwards towards the costal margin, and filling the left flank. Over this there is tenderness on palpation. *Per vaginam*, the uterus is enlarged, 4 inches to sound. Fundus lies towards right sacro-iliac synchondrosis. Posteriorly and to left, pelvis is occupied by firm effusion, which, however, does not descend much below pelvic brim.

For twelve days after admission there was little change in the tumour. Pain was sometimes very marked here and there over it, and required relief by sedatives. On 15th May fluctuation was indistinctly felt just at level of lowest rib on left side, and under ether spray an incision was made, but only a trace of pus obtained. For the next two days there was no change, but on 17th a narrow sinus was found to lead from the opening made on the 15th to the border of the quadratus lumborum, where it dipped down to communicate with a large cavity. An incision was then made over the edge of the quadratus, a little way above the iliac crest, and the abscess cavity opened, emptied, washed out, and drained. On 30th May the patient went home well.

In this case the pus had burrowed not towards the anterior abdominal wall and Poupart's ligament, but upwards and backwards along the the posterior abdominal wall. Why a little droplet passed from the main mass of the fluid over the border of the quadratus on to the external surface of the lumbar aponeurosis would form a curious subject for speculation. It is also curious to note that this little droplet, while insufficient to open up a passage for the evacuation of the abscess, was sufficient to open up a sinus wide enough for a probe.

The question, also, as to what determined the initial direction of the abscess towards the posterior abdominal wall must be left unanswered. Perhaps the laceration of the cervix led towards the posterior parametrium—perhaps some old cicatricial condensation formed a limit anteriorly.

Even more curious and puzzling was the course taken by the pus in the following case:—

CASE IV.—*Puerperal abscess of very slow formation following the course of the femoral vessels and approaching the surface in the middle of the thigh.*

Mrs. B., æt. 25, admitted 11th June, 1898; had a still-born child three months before admission.

Report on admission.—The history is somewhat indefinite, as the patient does not remember the order of events. It would appear that during her pregnancy she enjoyed very good health. On a certain Monday night about three months ago she began to vomit. Until the following Friday her mind is a blank, except for information which her husband has imparted to her. With the vomiting she began to take fits, which came very frequently. On the Wednesday night they came every half hour. Towards Thursday afternoon they became less frequent, and at midnight the stillborn child was delivered with instruments. The patient came to herself on Friday, and has no recollection of a single pain.

Since the confinement she has always been very weak, and her best effort has only enabled her to sit up for nourishment. The lochial discharge went on for three weeks, gradually getting less until it disappeared. No discharge of any kind has been seen since then. Some time after her confinement she began to be troubled by shiverings, flushings, and profuse sweatings. She has no headache, and only on one occasion during last week has she suffered from vomiting. She has lost flesh greatly. A cough started about six weeks ago, but she only had a slight spit.

About a week after her confinement pain started in her left shoulder, and in a few days left this for the left foot. From there it went to the left thigh. The only part that ever swelled was the left thigh, and the swelling was confined to the thigh alone.

A few days after her confinement she was put under chloroform for repair of the perineum.

Patient is greatly emaciated, with a slight flush on each cheek. Pulse 99, weak, but regular. Tongue moist and slightly furred. Heart and lungs normal. Abdomen presents normal characters, but just above inner half of right Poupart is a small hard swelling continuous under the ligament, with a swelling of a similar character along the course of the femoral vessels. Pressure over this is greatly dreaded by the patient, and she resists any movement of the thigh upon the trunk. *Per vaginam,* uterus measures 2⅝ inches. Cervix has been lacerated towards the left side, and along the posterior wall of the vagina is an irregular cicatrix, which, however, is not continued into the cervix. There is some fulness in the right anterior quadrant of the pelvis, but no great tenderness anywhere.

On the second day after admission the temperature rose to 104·4°, the rise being preceded by two severe rigors. This was said by the patient to be exactly similar to attacks she had on several occasions before admission. After this the pain in the groin gradually lessened, and on 18th June she could flex and extend the thigh without pain. On the following day (19th June) another rigor occurred, and the the temperature rose to 105·2°. Again, on 23rd June, the temperature rose, this time to 105·8°, but in the intervals between the attacks the patient felt rather easier, and, on the whole, improved in her general condition, though she suffered from profuse perspirations. The temperature continued to vary considerably, but the highest point reached was 103° on 4th July, the usual range being from 101° to 102° in the evening to about 98° in the morning. The tumour in the region of Poupart rather diminished, and the pain lessened. About the middle of July pain and tenderness and some fulness began to develop on the inner side of the middle of the thigh. On 19th July there was pitting on deep pressure on the posterior aspect of the thigh at the junction of upper and middle thirds. This gradually disappeared, but pain continued slightly along the sheath of the femoral vessels. Then the pain and hardness passed to the front of the thigh, and on 29th July, there being a suspicion of fluctuation deep in that region, an incision was made there, but no pus was reached. The œdema and tenderness left that region again, and in about a week after the incision the temperature became almost normal—99° in evening, slightly subnormal in morning. With the fall of the temperature a general swelling of mid-thigh occurred, and on 15th August a slight reddening of inner side of thigh was observed. This slowly increased, and on 30th August an incision was made close to the site of the former incision of 29th July, and a quantity of pus was evacuated from a cavity, along the anterior wall of which lay the femoral vessels. This cavity was very slow of closing, and the patient left hospital only on 11th October, after a residence there of four months, and an illness of seven months.

I need not say that during this long illness all sorts of expedients were tried to reduce the temperature or counteract the septic poison, and among them quinine in large doses and antistreptococcic serum were freely used. Nothing, however, seemed of any avail, except rest in bed and good food. In spite of the high temperatures, the perspirations, and the gradual formation of the pus, she steadily though very slowly improved, and her condition at the time of the first incision was distinctly better than on admission.

The interest of this case mainly lies in the course the pus followed, or rather, we should perhaps say, the organism which ultimately produced the pus, for certainly up till the end of July, and probably till the middle of August, when redness began to appear on the surface, there was no pus in sufficient quantity to be detected.

When admitted to hospital the site in the pelvis was almost the usual one, but on the thigh the inflammation was advancing along the course of—certainly not within—the sheath of the femoral vessels. From this as a centre it burrowed along the inter-muscular fasciæ, sometimes towards the inner, sometimes towards the outer, sometimes towards the anterior aspects of the thigh, passing occasionally near the surface and then withdrawing again. In such a case it would not have been surprising had multiple abscesses formed in the inter-muscular spaces, but the remarkable fact here was that, while the inflammation took various directions at different times, the pus formed in only one place, far distant from the original focus, and after an interval of over five months from the date of infection. There was apparently difficulty in the way of pus formation, and there are no doubt many cases of similar infection in which the difficulty is not overcome, and the patient recovers without the formation of an abscess.

It is to be noted, also, that with the development of the pus locally, the temperature fell nearly to normal. The systemic reaction continued so long as the infective material kept travelling about and invading ever fresh tissues, but when this material got walled in, so to speak, the absorption of poison was reduced to a very small amount.

While pelvic abscess is still a frequent puerperal sequela, there are cases of injury during labour which surprise us by remaining free from sepsis. Of this fact the following case supplies a most interesting illustration:—

CASE V.—*Unusual injury during labour—Perforation of posterior vaginal wall.*

Mrs. W., æt. 21, i-para, admitted 5th September, 1899.

Report on admission.—Patient is a healthy-looking young woman. She was delivered of her first child six months ago. She states that for the last three months she has noticed something protruding from the vulva, very small at first but increasing in size of late. There is very slight pain, worse on exertion. Three days before labour she fell off a table and hurt herself. The pain began at that time and lasted for a short time after labour. It was then absent until three months ago, when she first noticed the "growth." The child was born at the eighth month and died of "jaundice" a week later. The pain has never been severe. Patient has always been healthy, but has occasionally a feeling of weakness. Menstruation has been perfectly regular; there is no leucorrhœa.

A band of tissue was found stretching across the vaginal lumen, and this protruded at the vulva when patient moved about. Its lower attachment was by a rounded cord, about half an inch in diameter, to the left side of the vaginal orifice near the meatus urinarius. The upper attachment was flattened out and attached somewhat obliquely over the length of about an inch and a half to the right side of the vagina. This band is covered with mucous membrane on all sides, and looks as if it had been detached from the posterior vaginal wall by a process resembling central laceration of the perineum.

On 12th September this band of tissue was excised, and on 20th September patient went home.

On examination of the excised specimen, the explanation of its origin above suggested was confirmed by finding a cicatrix along its posterior border, and on the posterior vaginal wall was a cicatrix which though, as might be expected, it did not correspond in direction, was probably the place from which the portion of vaginal wall represented by the band of tissue had been torn off.

Her physician was written to, but in his reply reported that the second stage of labour was over before he saw the patient, and he had not observed anything unusual at the time. There can, however, be no doubt that the head of the child had pouched out the posterior vaginal wall in its descent, and that this, instead of retracting over the head, had spread out, before it had thinned out in its central part, until an opening was made, and that then the child had passed through this opening.

Tears of the posterior vaginal wall during labour are not uncommon, just as laceration of the perineum is a frequent occurrence, but while central laceration of the perineum has been occasionally observed, I know of no case, like the one just reported, of a similar injury to the posterior vaginal wall.

REMARKS UPON THE OPERATIVE TREATMENT OF INFECTIVE THROMBOSIS OF THE SIGMOID SINUS FOLLOWING CHRONIC PURULENT OTITIS MEDIA: RECORD OF A CASE SUCCESSFULLY TREATED.

BY ARCHIBALD YOUNG, M.B., C.M., B.Sc.,

Senior Assistant in Surgery, University of Glasgow; Surgeon to Central Dispensary, Glasgow.

THE operative treatment of infective thrombosis of intracranial sinuses is one even now of only recent date, and although there have been already recorded not a few cases of successful treatment, there seems to me to be still justification for the following record.

The case was brought before the Glasgow Medico-Chirurgical Society upon 21st April, 1899, and as it suggested several interesting clinical, anatomical, and pathological questions, I have ventured to record it at some length.

At the very outset one is met with the difficulty so commonly experienced in such cases—viz., the somewhat obscure diagnosis. Although in thrombosis of the *cavernous* sinus there exist, as a rule, definite enough aids to diagnosis, it is, unfortunately, not so in thrombosis of the *sigmoid*, or, generally, of the *lateral* sinus; and the irony of this is apparent when it is remembered that, even yet, the prognosis in the former is of the gravest nature, while, given early recognition and prompt operation, the prospects of recovery in the latter are now not nearly so remote as they were.

Of course, when an extensive disintegration of the septic thrombus has occurred, and systemic dissemination of the infective material has begun to take place, there appear very soon unmistakable signs of pyæmia—generally shown chiefly in the formation and development of septic pulmonary foci, with resultant abundant foul-smelling sputum (often blood-tinged), frequently repeated rigors, violent temperature variations, and, often, local tenderness and œdema, over mastoid, course of lateral sinus, and down course of internal jugular vein. These signs, with others indicative of constitutional disturbance of a grave nature, are, however, in the very nature of things, of only late appearance in the history of any given case, practically all being explained as indications of a general pyæmia. It may, indeed, be at once admitted that, given any considerable constitutional generalisation of infective material, the value of operative treatment becomes, at least, debatable.

There remain, however, for consideration the doubtful cases, *i.e.*, those in which signs of pyæmia are not at all conclusive; where, *e.g.*, as in the present one, any lesions in the lungs remain of a strictly limited type; where, if infective foci exist, they are of a most minute type, never attaining to any considerable proportions.

The question as to how far infective foci in the lungs can be recovered from is still one admitting of discussion, but it seems at least probable, that foci of a minute size are capable of resolution, and, therefore, it is all the more incumbent upon the surgeon to give even the most unlikely cases every possible chance. The clinical difficulty which arises in the diagnosis of such doubtful cases is certain to complicate the situation, for in the absence, as has been said, of distinct pyæmic signs, the involvement of the sinus is often exceedingly difficult to demonstrate prior to operation. It is all the more important, then, that in all operations upon the mastoid region for any of the sequelæ of chronic purulent otitis media, at least where the smallest doubt exists, a careful investigation of the sinus groove ought to be made, especially if there exist signs of erosion of bone on the posterior wall of antrum. I believe it to be worth while, also, to draw attention to another point bearing upon this, viz., that, as a rule, it is not at all necessary to delay the complete surgical treatment of the part after the opening of an external mastoid abscess.

The superficial tissues admit of very thorough treatment immediately free incision has been made, and it is matter of common experience that the tissues can be very easily rendered aseptic prior to the deeper exploration that must be carried out. Not infrequently one hears of mastoid abscesses in connection with a purulent otitis being treated by simple incision, and, at anyrate, a considerable time allowed to elapse before the complete eradication of the septic accumulation in the middle ear, mastoid cells, and antrum. Such a method of treatment is, I believe, to be strongly condemned, for the risk of serious intracranial mischief is not by any means negatived by the appearance of pus externally. The latter may be regarded in the light of a danger signal, certainly not in the light of a safety valve.

It is important, therefore, that even in apparently simple cases the sinus ought to be carefully and systematically investigated, and that at as early a stage as possible.

As to the actual surgical procedure to be adopted in any case of infective sinus thrombosis, it may at once be acknowledged that, *in advanced cases*, with the clot extending well towards the torcular herophili and down the jugular, nothing but a most extensive clearing out of the sinus contents and of the upper part of the jugular—a preliminary ligation of the latter well below the thrombus having been carried out—is likely to avail.

It is *in earlier cases*, where the clot is still limited to the sigmoid sinus, and specially to the knee of the latter, that there is not a little difference of opinion as to the best method of treatment.

In the case recorded here it will be noticed that the method followed was that of a simple incision through sinus wall, the laying open of the knee of sinus, and the gentle evacuation of the semi-fluid *débris*. No attempt to completely dislodge the whole thrombus was made, and for these reasons. Firstly, any attempt to clear out the whole mass would probably result in the dissemination of a quantity of infective material into the blood-stream, and I deemed it advisable to leave, between the general blood-stream and the infective centre, the protective layer of what we may, I think, regard as non-infective thrombus, rather than in a more radical effort at clearance run the risk of any further systemic infection than might already exist. Secondly, I believe that, by a mere opening of the sinus, with the provision of easy drainage, there is little risk of the products of disintegration of the clot doing any further harm; while, if the more radical method of ablation of the sinus be adopted, a firm packing of the sinus, or, at least, a firm compression of its walls, such as is necessary to control the free hæmorrhage which results, is the very thing to prevent the harmless escape of any septic material which may escape notice, and so inevitably systemic absorption is sure to continue. Besides, it is hardly to be expected that the disturbance of a septic mass, such as is involved in any radical effort at removal, is likely to pass without some infective *débris* being carried into the general blood current.

In the present case I had every reason to congratulate myself upon the result of the method adopted. The simple incision, evacuation of semi-fluid contents, introduction of a light gauze drain, with daily dressing and renewal of this, served every purpose, and there was the added advantage of freedom from anything like free hæmorrhage such as a more extensive interference with the sinus would have involved.

It but remains for me to call attention to *two* points of not a little importance in the treatment of such cases. It will be observed in the full report of the case that, on incision being made, two erosions were met with. The interest attached to these lies in the fact that the larger one led directly into the sigmoid groove, and if one had attempted to follow the directions given in more than one text-book, viz., to use this as a guide to the antrum—it was in position of so-called squamo-mastoid foramen—a rather serious mistake would have been the result. The importance of using only the certain anatomical guide of the post-supra-meatal triangle in opening into antrum is easily apparent.

Again, as to the actual treatment of the cartilaginous meatus and the bony posterior wall of the external meatus, it will be seen that the method adopted in this case is different from that usually followed. Most operators even yet rest satisfied with opening into antrum, evacuating the infective contents as freely as possible, and preserve not only cartilaginous meatus intact but also the small bridge of bone forming the posterior wall of the bony meatus. It has long seemed to me that there was for this no adequate reason, and one could not obtain, if that were adhered to, at all free access to what should be then the common cavity of middle ear, antrum, and mastoid excavation. By slitting up the posterior wall of cartilaginous and carefully cutting through the bony posterior wall, the external meatus was also thrown into the one common cavity, and a much more satisfactory, as well as more rapid, filling up of the parts with healthy granulation tissue was the result.

The idea of preserving such a useless bridge of tissue, and the attempt at irrigation of the narrow, circuitous channel between external meatus and mastoid excavation through middle ear, tympanic attic, and antrum, should, I believe, be now discarded.

I may say that, in a subsequent case, I followed the same method of treatment, and in it also I was convinced that one obtained in that way a much more speedy and satisfactory repair than, according to the older practice, could have been looked for. In neither case has any sinus posteriorly or any meatal discharge persisted, the healing process being apparently complete.

George M'K., æt. 2½ years, was brought to the Central Dispensary upon the 9th January, 1899, and seen first of all by Dr. Robert K. Currie, who, recognising the necessity for surgical interference, referred the child to me.

The immediate cause of the child's mother seeking medical advice was the appearance, six days before, of a swelling above and behind the left ear, and a marked alteration in the child's general condition—drowsiness, alternating with fitful restless periods—during the forty-eight hours immediately preceding date of application at the dispensary.

Notes of history of case, as obtained on above date.—The child suffered from measles six months previously, and about the tenth day of illness there was observed a discharge from the left ear, which discharge was never very abundant, and, though varying in quantity from time to time, never entirely ceased until three weeks ago. The discharge, to judge from the mother's statement, seems to have been throughout practically free from any offensive odour.

From the time of the cessation of the discharge, three weeks ago, the mother observed a marked change in the child's general state. He was less bright and lively than usual, his appetite less satisfactory, and once or twice his motions were diarrhœic and exceedingly foul-smelling. At night he usually slept fairly well, but would now and again start up, crying aimlessly, apparently without any external exciting cause. The mother thought that he seemed to be suffering pain.

During the attack of measles, and for some little time after, he had a slight cough; but this had quite passed off until a week or two since, when it once more began to give trouble. For the week immediately preceding his being brought to the dispensary it had been persistently troublesome, but no expectoration had been put up; whether any may have been swallowed the mother could not say. Six days ago—*i.e.*, on the 3rd January—the swelling above referred to made its appearance above and behind the left ear, day by day increasing notably in size, and extending also considerably forward. The accompanying constitutional change soon became aggravated. Pain seemed to be experienced in and around the ear; the child showed great restlessness and fretfulness, occasionally, however, falling into a deep sleep, from which he would suddenly awaken with a cry.

He took little food; what little he did take he usually vomited, and his bowels were with difficulty moved by castor oil. The cough was very troublesome, and sometimes a paroxysm ended in an attack of vomiting.

Notes of condition on same date.—When I saw the child he appeared, as he lay in his mother's arms, to be in a condition, if not of semi-coma, at least of intense drowsiness.

He could be roused, but with considerable difficulty. He presented a feature which one becomes familiar with in cases of meningitis, tubercular or purulent, but even more constantly in cases of cerebellar abscess, viz., a persistent, almost spasmodic, opening and closing of the mouth—half-sigh, half-yawn. His pupils were equally dilated, but contracted to light stimuli. There seemed to be no paralytic condition, either of face or limbs. The complexion was pale, and somewhat earthy in hue. The tongue was coated and dry, covered with a brownish-yellow fur. The most notable objective phenomenon was, of course, the large diffuse swelling above and behind the left ear. This swelling was not sharply delimited from the surrounding scalp, but shaded insensibly into the level around.

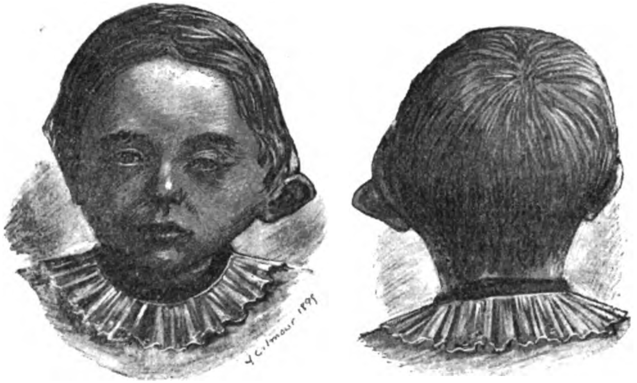


FIG. 1.

(From a water-colour drawing).

Roughly, it may be said that its upper and posterior borders coincided, respectively, with the temporal ridge on the parietal bone, and the posterior margin of the mastoid process. Anteriorly, it shaded off very gradually into the level scalp. The effect was characteristic (Fig. 1). The whole external ear was, as it were, raised bodily from its close bony relations, and projected downwards, outwards, and forwards. Palpation revealed, in spite of the tense temporal fascia and periosteum, the presence of deep-seated fluctuation, the swelling being due to a very large sub-periosteal parieto-squamo-mastoid abscess.

There was no noticeable tenderness on deep pressure over the upper part of the left internal jugular vein, though the upper part of anterior and posterior cervical triangles presented some œdematous swelling. Over the abscess itself the skin was pale, glazed, and tense. Percussion of the skull caused no pain, and the note obtained was of no diagnostic value.

The *temperature* (axilla) registered 100·2° F. The *pulse* was 140 to 150 per minute, weak, and irregular in rhythm. *Respirations* were 46 to 50 per minute. Even during the comparatively brief period of examination the cough was noticed to be very troublesome, but was not accompanied by expectoration.

The chest was at this time only hurriedly examined, but neither then nor at any subsequent examination was evidence of any gross lesion of a local septic character obtained.

Ears.—In the *left meatus* was a quantity of partially dried purulent secretion, with an intensely foul odour. The membrana tympani was practically gone, represented only by a congested turgid-looking fringe inferiorly and posteriorly. The middle ear contained viscid discharge and a certain quantity of granulation tissue. This material had the same foul odour as the discharge in the meatus. At the time of examination no bare bone was felt, either on tegmen tympani or upon the posterior wall.

In the *right ear* nothing abnormal was found.

Eyes.—The fundi were not examined on this date; but next day, while the child was still under the influence of the anæsthetic after the operation, a satisfactory view of both fundi was obtained. Beyond some undue injection of the left disc, little abnormal was noted.

Family History.—The child was the sixth (youngest) of a family of six, of which number the second and third are dead, the former dying at age of 6 months after a short illness of six days subsequent to vaccination, the latter dying at age of 3 years and 2 months from scarlatina. The other members of the family have always enjoyed exceptionally good health. I have seen all, and they are apparently strong, sturdy children, the eldest about 12 years old. The mother and father both come of a healthy stock, but the father seems to suffer from some cardiac affection.

Diagnosis.—It was, of course, obvious that there was here a very large sub-periosteal mastoid abscess, and the evacuation of this was urgently called for. It was, however, equally obvious that this was not the full extent of the mischief.

A definite, or in all respects satisfactory, diagnosis was difficult to arrive at.

The spasmodic movement of the jaw, the drowsiness, the dilated pupils, added to the history of checked discharge, raised in one's mind at once the possibility of intra-cranial abscess, and if such an abscess were present, its seat was in all probability in cerebellum, the points in favour of such a localisation being—(1) the persistently recurring masseteric spasm; (2) the absence of any definite paralytic or pressure signs, such as abscess in the temporo-sphenoidal lobe so often implies; (3) the failure to find, by speculum or probe, any necrosed or denuded bone or actual erosion in the roof of the middle ear, such as one is usually able to observe in cases where intra-cranial extension has occurred in the direction of the temporo-sphenoidal lobe.

On the other hand, (1) the frequency of the pulse, abnormally rapid, instead of slowed—as one usually finds in intra-cranial abscess; (2) the elevated temperature—the elevation, although slight, being in such marked contrast to the striking lowering of the temperature frequently met with in abscess; and (3) the hurried respirations. These points taken together threw considerable doubt upon the existence of an intra-cranial abscess, cerebral or cerebellar, at least uncomplicated.

A localised meningitis might have been quite consistent with the presence of most of the above-mentioned signs, and the presence of an abscess accompanied by a limited meningitis was regarded as possible.

Anything like a generalised septic lepto-meningitis was out of the question, however, considering the absence of any facial paresis, and having regard to the usual route by which, in young children, intra-cranial infection terminating in such a condition usually travels inwards. Any meningitis, if present, was almost certainly a localised condition.

What impressed one, however, more perhaps than anything, was (1) the irritating cough; (2) the history of the aggravation of this during the few days immediately preceding; (3) the peculiar pallor, combined with a slight earthy hue, of the complexion; and (4) the slight œdematous swelling over the upper part of both anterior and posterior cervical triangles. These points, despite the absence of any history of definite rigors, strongly suggested that an erosion of the posterior wall of the antrum had probably taken place into the sigmoid groove, and that there was probably present a localised thrombosis at the knee of the sigmoid sinus.

It was thought to be possible that, in addition, there might be some extension of the septic process backwards into the cerebellar fossa around the borders of the sinus, with, perhaps, the formation of a limited abscess.

Operation.—At 5 P.M. the following evening (10th January, 1899) the child seemed less drowsy than on the previous day, but he had passed a restless night, considerable spells of deep sleep alternating with periods of unrest, when he seemed to suffer pain at the back of the head, and occasionally started up moaning. His *temperature* registered 101·6° F.; the *pulse*, 120 per minute; and *respirations*, 48. Cough was persistent, and the odour of the breath unpleasant.

Dr. Thomas Kay very kindly administered the anæsthetic (chloroform) and I was assisted by Mr. Robert Gilchrist.

The left side of the head was carefully shaved and submitted to the usual routine procedure requisite for aseptic treatment. The lobule of the ear was then drawn forward by the assistant, and an incision made behind the ear in an obliquely vertical direction for about 2½ inches, right down to bone. This incision at once gave exit to a large quantity of brownish-yellow pus, having an intensely fœtid odour, the periosteum being raised from the bone over the mastoid, squamous portion of temporal, and a considerable extent of parietal. There was, therefore, no delay in raising and retracting the periosteum to locate the recognised site for further operation. The pus and *débris* of disintegrated tissue having been cleared away as thoroughly as possible, the margins of the wound were retracted, and the mastoid was more closely examined.

In the situation of the post-supra-meatal triangle an aperture large enough to admit a fine probe was found to exist, and further back was a larger aperture, about a quarter of an inch by one eighth of an inch in size, very close to the position of the squamo-mastoid foramen.

These superficial erosions were of considerable interest, inasmuch as the former was found to lead into antrum and the latter into the sigmoid groove, really thus exposing the sinus externally.

The ordinary steps of a mastoidectomy were followed out carefully. A gouge was employed throughout, and the bone, being comparatively soft, was easily manipulated. Following the former of the two above-mentioned erosions, little difficulty was experienced in reaching the antrum, and from that the tympanum. Both of these cavities were found full of broken-down, foul-smelling granulation tissue and pus. The malleus and incus were found embedded in this *débris*, and were removed. The small bridge of bone forming a portion of the posterior wall of the bony auditory meatus was carefully removed, and the cartilaginous meatus being split along this wall, the cavities of external auditory meatus, tympanum, antrum, and the artificial excavation opening into the latter, were thus thrown into one.

The posterior wall of the antrum was found eroded into the sigmoid groove. This erosion and the one externally were converted into one aperture by gouging away the intervening bone, and the sinus for an extent of about half an inch was thus freely exposed. It was found clothed in granulation tissue, a somewhat thick pus covering the latter and issuing from underneath the margins. The sinus and granulations were black and unhealthy looking, and the former, to the finger, felt hard.

It seemed probable that there was, at least, a localised thrombosis at the knee of the sigmoid, *i.e.*, just where the sinus bends downwards and inwards towards the jugular fossa and bulb. The granulation tissue and excessively foul-smelling pus were cleared away thoroughly, but the sinus, despite its ominous appearance, was not then interfered with.

With a view to the possibility of exploration of the cerebellum itself becoming necessary, in the event of signs of abscess declaring themselves more clearly, the bone immediately posterior to the sigmoid groove was carefully gouged away, and the cerebellar dura laid bare over an area of somewhat oval form, and half an inch by three-quarters of an inch in extent. The dura over the tegmen tympani et antri was also laid bare over a somewhat similar area, as the bone in that situation was found distinctly eroded, despite the failure to observe this prior to the operation. The dura in this position was found slightly reddened, but otherwise unaltered. The cerebellar dura at margin of sinus and over the part exposed was red and thickened.

Having thus thoroughly cleared the middle ear and antrum of their fœtid septic contents, and having freed the sinus from the granulations clothing it, these parts were rendered, as nearly as possible, aseptic by the introduction of gauze soaked in 1 to 20 carbolic lotion for several minutes, the meatus being also treated in this way.

The superficial tissues involved in the external abscess had also been freely treated with carbolic lotion, and they, with the middle and external ear, antrum, &c., were carefully dried with aseptic gauze. The middle ear and antrum were packed with iodoform and boracic acid (1 to 4), and the same mixture rubbed into the superficial tissues. These cavities were then firmly packed with iodoform gauze from the wound posteriorly, and the sinus, temporo-sphenoidal and cerebellar dura similarly protected. A narrow strip of iodoform gauze was introduced through the external meatus into the common cavity of middle ear, external ear, and antrum. No sutures were used, and no ligatures were required to check hæmorrhage. The whole cavity externally was packed with iodoform gauze, and an external dry dressing of sterilised gauze applied.

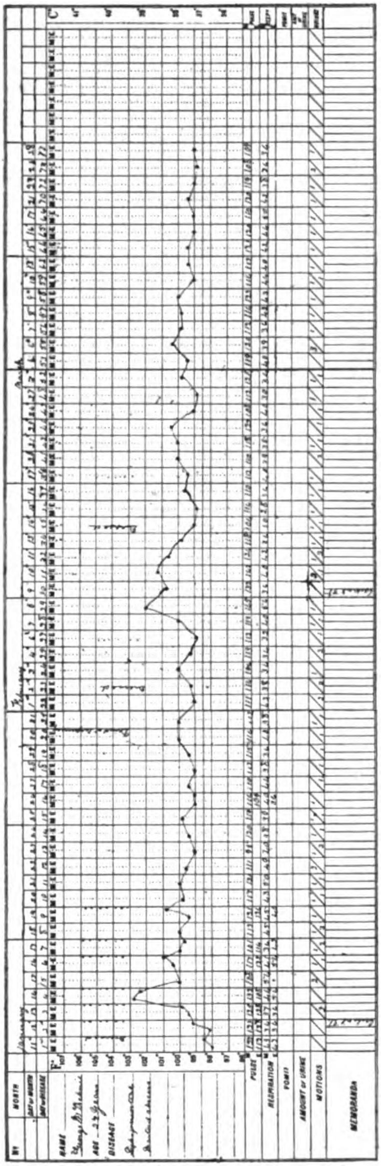


Fig. 2.

Note.—The records on this chart only date from the morning after the first operation. *Previous records.*—9th January, 100·2° F.; 10th January, 101·6° F.

The child took chloroform well, but the pulse at the end of the operation, which lasted about an hour and a half, was very weak, and at times difficult to count.

The *prognosis* seemed to be highly unfavourable, both Dr. Kay and myself regarding the prospects of recovery as exceedingly remote.

The *immediate effect of the operation* was, as shown by accompanying chart, a rapid drop in the child's temperature—101·6° F. before operation, it was 98° F. next morning, and 98·4° F. the following evening. The day following, *i.e.*, during the second day after the primary operation, it showed a distinct tendency upwards. The cough was still very troublesome: and it was observed when dressing the part on the day immediately following the operation (11th January), as also upon the 12th, that the sinus, where it was freely exposed, still presented the same ominous appearance. On the evening of the 12th, therefore, when dressing the case with the assistance of Dr. Arthur D. Ketchen, I opened up the knee of the sinus for about three-quarters of an inch and cleared out a quantity of fœtid, dark-greyish, partly disintegrated clot. A small drain of narrow iodoform gauze was introduced into the cavity thus exposed, and the parts externally dressed as before.

Daily dressing was carried out through the next week, and a quantity of foul-smelling *débris* was discharged. The sinus in course of a week or so had quite filled up, however, and the whole wound was then much less frequently interfered with, dressing being thereafter only twice weekly.

The temperature, which, prior to the opening of the sinus, had been showing a distinct upward tendency, continued to rise for two days, its highest register being 102·8° F. It then, however, came gradually down, its downward course marked by certain irregular oscillatory fluctuation, until it practically reached the normal level.

The *subsequent course of the case* was one of almost uninterrupted recovery. From the end of the week immediately following the the opening of the sigmoid sinus the cough showed a rapid improvement. It became less and less frequent, and very much less harassing. The wound healed very rapidly, granulating freely and healthily, and is now absolutely healed, the site being marked merely by a linear cicatrix over a distinct depressed area immediately behind the ear. The child's general condition showed a striking improvement. He became bright and lively, clamoured for food (he was, of course, restricted to milk), slept soundly, and seemed quite free from pain. He soon acquired quite a different complexion, put on weight, and now he appears to be in the pink of condition—well nourished and well coloured. There is no discharge from the ear. Hearing is, apparently, little less satisfactory than on the right (unaffected) side.

Note.—The secondary operation on the 12th, viz., the opening up of the knee of sinus, was performed without an anæsthetic.

ON THE VALUE OF PERCHLORIDE OF MERCURY AS A DISINFECTANT FOR FLOORS.[1]

BY ERNEST L. MARSH, M.B., D.P.H.,

Special Plague Medical Officer attached to the Plague Research Laboratory.

THE experiments of Mr. Hankin and Dr. Pitchford showed that perchloride of mercury (1 in 5,000) caused the death of the plague micro-organism in one minute. There are, however, certain disadvantages attached to its use as a common disinfectant. It is precipitated by any soluble alkaline carbonate such as carbonate of ammonia. It is decomposed by oxides such as lime. The sulphur and the sulphuretted hydrogen of decomposing organic matter convert it into insoluble sulphides. It acts only as a local disinfectant. So that when the test of disinfection-efficiency includes the organic and other matter commonly present on the floors and walls of native houses, factors of great importance in regard to the retention of the potency of perchloride of mercury in ordinary solution are introduced. The large augmentation of organic and mineral matter received by the floors of ordinary native houses from the use of cowdung as a surface application, occasions a concurrence of chemical and physical conditions that must make the use of a simple solution of perchloride entirely unsatisfactory. For when sprayed over a floor of this character, the albuminous material causes coagulation, and, thus, an actually impervious film is formed, beneath which the germs may thrive. In order to ascertain the degree of interference, so caused, a number of experiments were performed. A series of test tubes containing 0·5 to 5 grammes of sterilised fresh cowdung were prepared, and 10 c.c. of perchloride of mercury (1 in 5,000) were added to each. Then the tubes were inoculated with a glass bristle wetted on its lower third with a thin film of living plague culture, obtained from the surface of a three days' old agar plate. After eighteen hours the bristles were withdrawn, washed in a weak solution of carbonate of soda, and inoculated *seriatim* into tubes of nutrient broth. After ten days, at room temperature, it was found that only quantities of 2 grammes and under of the cowdung remained sterile.

---

[1] Abstract of a report presented to W. M. Haffkine, Esq., C.I.E., of whom information on this question had been requested by the Acting Plague Commissioner.

In order to lessen the disadvantages mentioned above, certain other substances are added to the perchloride of mercury, such as chloride of ammonia and hydrochloric acid.

In Bombay, the following disinfectant is used:—

Perchloride of mercury, ...	21 oz.
Chloride of ammonia, ...	15 ,,
Hydrochloric acid, ...	100 ,,
Water, ...	340 ,,
	476 oz.

For actual use, 5 oz. of the above solution are diluted in 1 gallon of water; the strength of the perchloride is thus 1 in 725.

Two samples of this solution were tested with regard to their general germicidal power—*i.e.*, with regard not only to the plague bacillus, but to all other germs. The one sample of the solution was made in the laboratory, the other was such as was used by the plague officers in one of the districts of Bombay. The result showed that 0·5 gramme of ordinary cowdung could be efficiently sterilised by 10 c.c. of the first solution, but that 0·8 gramme of cowdung could not be completely sterilised of spore-bearing micro-organisms by either of the test solutions. The same experiments were repeated, the effects of the solution being tested this time in relation to the plague bacillus alone. It was found that 10 c.c. of the first solution were capable of germicidal action up to 2·0 grammes of cowdung, of the second only up to 1·5 grammes. Scrapings were now taken from floors of native dwellings, and these were tested in a similar manner with the solution from the Bombay offices. The first experiment showed that 10 c.c. of this solution did not efficiently sterilise from spore-bearing organisms more than 0·3 gramme of cowdung. The second showed that up to 0·7 gramme of cowdung, the death of the plague bacillus took place. As 0·7 gramme of cowdung is the amount commonly recoverable from 4 square inches of the earthen floor of a native house, when removed to a depth of one-sixteenth of an inch, 100 square feet would yield an amount which would require about 8 gallons of the 1 in 725 acid solution for effective disinfection.

Experiments on the efficiency of sea water (electrolysed) as a disinfectant of cowdung floors, either alone or as an *application before spraying with perchloride of mercury solution.*

The advantages of employing an acid along with a chloride as an addition to the perchloride solution have already been mentioned. The question naturally arose whether ordinary sea water could not be used as the chloride. But while its use could not be in any special way more advantageous, it has, in the first place, the drawback of being distinctly alkaline, and of thus diminishing the effect of the perchloride; and, secondly, it already contains an abundance of organisms which would, in part, engage the energies of the solution. Sea water may be used with special advantage, however, if it be electrolysed beforehand. This procedure not only sterilises the sea water, but makes available and active the oxidising and disinfecting agents that are potentially present in it. The process practically results in the production of a chemically active solution of hypochlorous acid ($HOCl$). In contact with organic matter, this hypochlorous acid breaks up into hydrochloric acid and oxygen, and it is on the liberation of oxygen that its value as a disinfectant largely depends. The amount of available chlorine liberated from sea water by electrolysis varies from 0·5 to 1 gramme per litre. This chlorine, in the presence of water, acts directly as an oxidising agent.

The first experiments showed that an exposure of one to two minutes to the action of electrolysed sea water was sufficient to kill the living plague bacillus. The next series of experiments was on the effect of this prepared sea water on scrapings from the floors of the native houses. It was found that 10 c.c. of the sea water were incapable of freeing 0·1 gramme of the test material from the more resistant organisms present, but were able to destroy vegetative forms (comparable to the plague bacillus) up to 0·5 gramme. Calculating from this, and taking the effective available chlorine in 10 c.c. of sea water as 0·771 gramme per litre, it would require 11 gallons of electrolysed sea water to disinfect 2,520 grammes of surface material removable from 100 square feet of floor.

The result of using only 5 gallons on 100 square feet was that twice as many colonies appeared on the cultures after the application of the sea water as before, owing to the breaking up of groups of organisms, the individual members of which started new colonies.

The next experiments were on the combined efficiency of electrolysed sea water and perchloride of mercury solution. A weighed amount of the floor scrapings was first thoroughly mixed with 10 c.c. of the sea water for thirty to forty minutes.

The excess was pipetted off, and 10 c.c. of a 1 in 725 acid solution of perchloride were added. After eighteen hours, a minute quantity of the dirt was added to broth, and incubated at room temperature for ten days. This showed that up to 1 gramme of the scrapings could be thoroughly sterilised by such treatment, while, as mentioned above, when the perchloride was used alone, only an amount under 0·4 gramme could be so sterilised.

A continuation of the experiment mentioned, as to the remarkable effect of adding an insufficient quantity of sea water alone, was made. In addition to the 5 gallons added, 8 more were subsequently applied to the floor, and, then, perchloride solution (1 in 725) was added, with the result that the number of colonies recovered from 1 gramme of dirt was reduced from 10,704,600 to 78,480, a reduction of 98 per cent.

The previous application of the electrolysed sea water has the following advantages:—

1. The surface, being rendered friable, is more easily acted on by the perchloride.
2. It oxidises and neutralises the organic matters which interfere with the action of the mercury solution.
3. It enables spore-bearing organisms to vegetate and so become more easily destroyed.

The following remarks on the character of native Indian floors, which are presented in the form of a footnote in the report, will doubtless be of interest to the readers of this *Journal*:—

"According to analyses by Voelker and Leather on the composition of Indian cattle dung, published in the *Agricultural Ledger*, No. 3 of 1894, the mean of six analyses of six samples showed a percentage composition of 35·7 organic matter, 27·7 mineral matter, and 36·6 moisture. In the same reference it is stated that, for purposes of manure, cattle dung at the rate of 120 cwts. per acre per annum is recommended to be applied to land. It is interesting to remark the generous treatment of an acre of domestic flooring. Allowing that 25 grammes represents the amount of moist cowdung commonly applied to 1 square foot of the surface of a mud floor—a moderate estimate according to control results—and that the average floor space of a native house measures 100 square feet, then 2,500 grammes or 5½ lb. of cowdung are applied at each weekly dressing, making a total of 285 lb. a year. It is easy to calculate further and show that, for purposes of domestic use, cowdung at the rate of 1,100 cwts. per acre is applied to the floors of ordinary native dwellings in India each year.

"In many houses the cowdung is mixed with a reddish clayey soil to lighten the colour of the application and improve its cohesion. In Bombay a little of the red soil is often blended with mud from the street in varying proportions, or mud alone may be used. When applied on a basis of beaten earth or mud the air rapidly dries a fresh-spread application, giving the surface a firm texture and an impermeability like that of coarse brown paper. The later effects of drying are shown in cracks, fissures, and loosening of the surface in flakes.

"It seems doubtful whether the practice is performed more in accordance with the precepts of Hindu sacred law than simply as a measure of utility. The author of *Govinda Sâmanda, or the History of a Bengal Ráiyat*, offers the suggestion that its use indicates it to be a disinfectant. In describing and commenting on the practice in Chapter XI, he says:—'The women of the household make a solution of cowdung and water, and sprinkle the liquid by the hand on the open yard, which is next swept by a broom. . . . The rooms and the verandahs require to be cleansed and washed in another fashion. As the flooring was entirely of earth, there being not a single brick or stone in the house, or a plank of wood either, every inch of the floor of every room was besmeared, by means of a bit of rag, with the said solution of cowdung and water, and allowed to dry itself. . . . The floor greatly improves by the process. It becomes smooth and glossy, and no cracks are visible. And as for any disgusting smell there is nothing of the sort—the smell, if any, being positively pleasant. Hindu peasants besmear their cottages with a solution of cowdung and water, because cowdung is regarded ceremonially as a purifier; it is, however, a question why Hindu lawgivers should have pitched upon cowdung as a purifier. . . . From the universal practice of the Hindus of Bengal, I should be inclined to think that cowdung was a disinfectant.'

"Its reputation as a disinfectant seems to be connected with the experience that insects and body-vermin cause less annoyance to the inmates of a freshly cowdunged room. It is claimed for cowdung and bullock's dung as against the dung of buffaloes that while the latter fails to rid the floor of vermin and insects, the former not only causes such nuisances to cease, but destroys their breeding ground (Letter of a Native to Dr. Haffkine).

"A native work on Aryan Medicine (*Arya Vaidyaka*, p. 83) makes reference to the use of cowdung and other products of the cow in ceremonial processes of purification, and to the value of cowdung as an agent for cleansing and purifying floors and walls. It also mentions its utility when mixed with cow's urine to allay the itching of prurigo, and effect the cure of certain chronic skin diseases. Mixed with salt it is recommended as an application to check excessive sweating of the hands and feet.

"According to the *Bombay Gazetteer*, vol. xviii, part i, p. 59, the *muntra*, or sacred verse repeated on the exhibition of the products of the cow on the *Shravani* Day, to purify the soul from sin, in translation is, *By the drinking of the five products of the cow, the sin which has penetrated into my skin and bones is burnt, like fuel by fire.*"

THE TREATMENT OF NEURASTHENIA.

By W. F. SOMERVILLE, M.A., B.Sc., M.D.,
Fellow of the Faculty of Physicians and Surgeons of Glasgow.

The term neurasthenia is by no means a satisfactory one, but it has come largely into vogue in recent years. It conveys for practical purposes a fairly well defined meaning, and the condition which it represents is doubtless the outcome of the special circumstances which mark the high pressure that is so largely a feature of our modern life.

Our grandparents, happily or unhappily for themselves, were free from the tension of existence which has necessarily been introduced by our methods of rapid travelling, incessant newspapers, hourly postal deliveries, telephone bells, and wire and wireless telegraphy. Their sphere, if less extensive, was certainly calmer, and was undisturbed by over-study, sensational novels, and the exciting tone of modern amusements.

The more busy life of to-day has brought its attendant penalties, and amidst the rush and scramble there are not a few who yield to the strain. These, as is to be expected, are found for the most part among a class whose nervous systems are subject to undue or premature stress, and this naturally will tell especially on the subjects of inherited nerve instability.

Hence the physician is now familiar with patients to whom, for lack of a better term, he applies the word neurasthenics.

They are for the most part of the female sex, and their disabilities, if not serious, at least cause them and often also their friends much annoyance. Their ailments are numerous and enter largely into their conversation. They are apt to be peevish, ill-tempered, introspective. They are constantly craving for sympathy, and regard themselves and their condition as "misunderstood." Sleeplessness, and headache following the slightest provocation, are frequent symptoms; and anæmia, dyspepsia, and constipation are also factors in these cases. It must be remembered, too, that the symptoms may closely simulate those arising from various organic diseases, and in many cases, indeed, the differential diagnosis is not easy. It is to be noted, too, that while these patients would resent the description "hysterical" applied to their condition, yet they are undoubtedly suffering from a serious form of hysteria which is not always easy to recognise, and is still more difficult to cure.

It is not to be wondered at that, in dealing with such cases, the physician as a *dernier ressort* has been accustomed to fall back upon change of air and scene, with possibly the administration or tonics and anti-spasmodics, which, however, only too often prove quite ineffectual. But it is now largely recognised that more success is to be expected from quite a different method of treatment—a method in which both moral and physical elements play a part.

Perhaps the most important detail of this treatment is the removal of the patient from her ordinary surroundings and from the undiscriminating sympathy of relatives and friends. The special atmosphere which such patients require cannot be obtained in public or private hospitals where general ailments are treated. The calm and rest which are essential are only possible in a home set apart for the purpose. These cases, which are really cases of functional nervous disease, demand special influences and consideration. The home for their reception should be situated in a quiet, healthy locality, and with a good sun exposure. It is all important that the isolation of the patient from her friends should be complete, no one being admitted to see her except the medical attendants and the nurse. Even the writing and receiving of letters are to be forbidden, and daily newspapers and periodicals with "horrors" excluded. It is well that the general idea of the treatment be explained to the patient so that her co-operation may be obtained, and that she may be desirous and hopeful of restored health even at the cost of temporary curtailment of liberty. The apartment occupied should be bright and airy, with cheerful pictures and restful wall paper. There is no colour so grateful to a neurasthenic patient as a suitable green. The bed should be most comfortable, and provided with a spring mattress. It should not face the window or other source of light. There should be a fire in the room, and the *tout ensemble* should have the appearance rather of a dainty salon than of a bedroom. While every kindness and consideration should be shown, all reference to the patient's ailments, and unhealthy sympathy with the patient herself, should be suppressed. The nursing, therefore, must be conducted not only with skill, but also with discretion. It is perhaps advisable to grant a certain amount of liberty during the first day of residence, but after this the details of treatment should be strictly insisted on, and the patient be kept in bed. She may be allowed to rise for washing and other necessary purposes, and when a hot bath is permitted the nurse should be in attendance. Confinement to bed will have to be maintained for from four to six weeks.

Next to isolation and rest is the proper and judicious feeding of the patient. It is usual to commence with a week of milk diet, but after this the diet must be improved. It is, however, a mistake to indulge, as is sometimes done, in excessive overfeeding of these patients. Under these circumstances food is apt to become loathsome, and the courage of the patient to give way. The increase in food should take place quite gradually, so as to be accommodated to the improved nerve tone of the patient. Each case necessarily requires individual judgment in this respect, but, speaking generally, it is found that the patient can soon be induced to take six or eight good meals in the day, together with three to four pints of milk. The patient should be weighed once or twice weekly.

Massage should be commenced the day after admission. The masseuse should be skilled and should have definite instructions from the physician in reference to the amount and kind of massage to be employed. At first *effleurage* for 10 to 15 minutes should be practised once or twice daily. The length of the *séance* should be gradually increased until an hour is occupied, and similarly the more severe forms of massage should be steadily introduced. Under no circumstances should the patient be made to feel exhausted or to suffer pain in the application of the treatment. Immediately on the termination of the massage she should be given a cup of warm soup, and, by darkening the room and otherwise, encouraged to sleep. It is soon found that insomnia, which has previously been troublesome, disappears, the patient getting a good night's rest in addition to sleep during the day.

A point of great importance is the promotion of the patient's muscular strength. Mere increase in weight is not sufficient. Unless there is definite improvement of muscular tone the patient will speedily relapse into her former condition. To obtain this improvement, I always order during the second or third week the commencement of passive movements, at first without, and later on with resistance on the part of the patient. Still later, active regulated exercises should be practised, the patient rising from bed for the purpose, and towards the end of the treatment it is well for the patient to join with others in the daily practice of suitable class exercises. The stimulus of such association is a mental tonic of decided value.

Another feature which should be included in the later stages of treatment is permission to go out driving or walking in the company of a nurse. Light fancy work involving no strain on the eyes, and simple games may also be permitted. Few or no drugs are required, and alcoholic liquors are neither desirable nor necessary.

The tedium of all this discipline is no doubt at the outset somewhat trying, but patients rapidly accommodate themselves to the daily routine and soon begin to take an intelligent interest in their progress towards cure.

The justification of the treatment is provided by the rapidity with which the patient gains, not merely weight, but also muscular strength and nervous energy and balance.

A detail of some importance, with a view to secure permanence of the cure, is to send patients direct from the home, not to their own friends, but for a holiday in the country. They may thereafter return with perfect liberty to their ordinary duties and opportunities.

The following cases may be quoted in illustration of the varied character of neurasthenic symptoms, and of the efficacy of the treatment above advocated:—

Miss A. B., æt. 17, sent to me by Dr. Renton and Dr. Barras, had been troubled with obstinate vomiting and a troublesome cough for about a year. In explanation of these symptoms no physical condition could be found. The patient had lost flesh, and was causing her friends much anxiety. The vomiting occurred entirely without pain or nausea, but almost invariably followed the taking of food. The cough was spasmodic in character, and not attended by expectoration. Under treatment all the symptoms rapidly subsided, but without any decided gain in flesh. After leaving the home, however, the patient not only remained well, but in a few weeks added a stone to her weight.

Miss C., æt. 29, was seen by me in consultation with Dr. Gordon, of East Linton. The patient had been confined to bed for several months with general weakness, and with pain and lameness in one leg. At first sight the case distinctly suggested the presence of hip-joint disease, but in the end this diagnosis was confidently excluded. She was placed under treatment, and soon the pain and lameness disappeared. She left the home quite well, her weight having increased from 6 st. 6 lb. to 7 st. 8¾ lb. She was able to walk for several miles, and her sleeplessness and other symptoms were entirely absent. Under date 15th September (nine months after patient returned to her friends), Dr. Gordon writes—"Miss C. has continued in excellent health. . . . She is able to work and walk about as usual, and has become an adept cyclist."

Miss D., æt. 22, had been complaining for nearly two years of constant pain and weakness in the back, which had latterly prevented her from following her employment. She had undergone various kinds of treatment, including massage and rest in bed in her own house for a month at a time, together with the application of blisters to the spine. As a result of the pain and loss of sleep she had become extremely weak and unhappy. The case is a good illustration of the uselessness of half-measures, and it was decided that she should be placed in the home for more thorough treatment. This very soon produced considerable improvement. At the end of two months the weight had increased from 7 st. 2½ lb. to 8 st. 10½ lb. She enjoyed refreshing sleep, and felt herself to be in first-class physical and mental health. She returned to business, and has been able to continue this without interruption.

No doubt the diagnosis of these and numerous similar cases lacks the definiteness of many organic diseases, but the number of these patients is not inconsiderable, and their physical and mental sufferings, not to mention their exclusion from the brightness and joy of life, are great.

Further, the obstinacy of the symptoms to ordinary medicinal measures is frequently made a ground of reproach to the profession. It is therefore of great importance that the nature of these cases should be recognised, and that every measure should be employed to restore to such patients a full measure of health and strength.

CORRESPONDENCE.

CREMATION.

To the Editor of the "Glasgow Medical Journal."

Sir,—If further evidence were wanted of the advantage of cremation (with subsequent urn burial of the ashes) over ordinary interment, such evidence would be afforded by the disclosures in Aberdeen—disclosures which, there is reason to believe, will find parallels elsewhere if sufficient investigation be made.

On grounds of sentiment, as well as public health, we appeal for support for the Scottish Burial Reform and Cremation Society.—Yours, &c.,

WESTMINSTER,
CHARLES CAMERON, M.P.,
ROBERT FARQUHARSON, M.P., } *Honorary Presidents.*

RENNY WATSON,
HENRY D. LITTLEJOHN, M.D.,
JAMES A. ALLAN,
JAMES M. BURNET,
JAMES CHALMERS,
CAMPBELL DOUGLAS,
EBENEZER DUNCAN, M.D.,
GEORGE L. HOUSTON,
T. RIPLEY KER,
PAUL ROTTENBURG,
ROBERT SORLEY, } *Directors.*

JOHN MANN, Jr., C.A., *Honorary Secretary.*

137 West George Street,
Glasgow, *11th September, 1899.*

CURRENT TOPICS.

BACTERIOLOGIST TO THE CORPORATION.—At a meeting held on 18th September, the Corporation elected to this office Dr. R. M. Buchanan, Professor of Medical Jurisprudence in Anderson's College.

ROYAL HOSPITAL FOR SICK CHILDREN.—Mr. Alexander Millar Lindsay, M.B., Ch.B., has been appointed house surgeon, and Mr. James Robert Chalmers, M.B., Ch.B., dispensary assistant surgeon.

QUEEN MARGARET COLLEGE.—The University Court of Glasgow University have appointed Dr. J. Lindsay Steven to be lecturer in medicine.

THE GLASGOW MEDICO-CHIRURGICAL SOCIETY meets on the first Friday of each month from October till May inclusive (in January on the second instead of the first Friday), and on additional dates in the course of the session as the business requires. The eight statutory meetings are specially devoted to the subjects of Medicine, Surgery, Pathology, and Obstetrics in rotation. The annual business meeting takes place on the second Friday in May. The Society meets in the Faculty Hall, 242 St. Vincent Street, at 8·30 P.M.

THE GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY meets in the Faculty Hall at 8 P.M. on the second Monday of each month from October till May inclusive. The first meeting will be held on the 9th inst.

THE OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY meets in the Faculty Hall at 8·30 P.M. on the fourth Wednesday of each month from October till May. It is hoped that the honorary president, Professor Stirton, will give his presidential address at the first meeting. The Secretary (Dr. A. W. Russell, 11 Royal Crescent, W.) requests that members who desire to read papers, show specimens, or otherwise contribute to the work of the Society, will communicate with him as early as possible.

THE SOUTHERN MEDICAL SOCIETY meets every alternate Thursday, from the beginning of October till the end of May, in the Southern Medical Club, 18 South Portland Street. The hour is 8·30 P.M., but the regular business does not begin till 9 o'clock. The first meeting takes place on the 5th inst.

THE EASTERN MEDICAL SOCIETY meets in the hall of Sydney Place U.P. Church, Duke Street, at 9 P.M. on the first and third Wednesdays of each month, from October till May inclusive. The opening meeting will be held on the 4th inst.

GLASGOW UNIVERSITY: DEATH OF MR. LACHLAN MACPHERSON.—Old students of Glasgow University will learn with genuine regret of the death of the venerable bedellus, which took place on the morning of 25th September. Evidences of a failing heart had been manifested for some time previously, but Mr. Macpherson was able to go about the University premises till within a few days of his death. He had reached the age of 82 years, and some four years ago he and his wife had celebrated their golden wedding. Mr. Macpherson's grandfather was a farmer in Laggan, and was out in the '45. His father was a non-commissioned officer in the Black Watch. Mr. Macpherson was appointed janitor in the old College in High Street in 1853, and became bedellus three years later. One of his surviving sons is minister of the South Parish, Greenock.

NURSING CHART.—We have received from Messrs. J. Wright & Co., Bristol, a nursing chart which is arranged to show the nursing report, diet table, &c., in front; while the back is occupied with "memos for sick nursing," in the form of a long list of drinks, broths, jellies, cordials, foods for convalescents, and so forth. The chart is quite good, but not better, we think, than those already in common use in the Glasgow hospitals.

REVIEWS.

Skiagraphic Atlas of Fractures and Dislocations, with Notes on Treatment for the Use of Students. By DONALD J. MACKINTOSH, M.B. London: H. K. Lewis. Glasgow: John Thomlinson. 1899.

THIS atlas contains a series of eighty skiagrams, the size of the reproductions being four by six inches.

Fractures have received the greatest amount of attention. Amongst some fifty of these there are six of Colles'. fracture, several of Pott's, and numerous others on various kinds of fractures, more especially those of the long bones.

With regard to dislocations, those of the elbow have received the greatest amount of attention, there being seven of this class.

In addition to the above there are many skiagrams of especial interest as showing the great value of the x-rays in the diagnosis of peculiar conditions, and in the location of foreign bodies. Amongst these are:—Coin impacted in the gullet, piece of metal in eyeball, hand showing tumour between first and second fingers, foreign body (pin) in the larynx, sarcoma of the humerus, bullet in the chest, and the hands and feet in a case of pulmonary osteo-arthropathy. On the opposite page to each skiagram is a short description of the condition, with the treatment required. The skiagrams are characterised by great clearness of definition, by an almost complete lack of any flaw, and by the absence of any signs of retouching for the purpose of clearer elucidation; in fact, each in itself is a work of art. There is here practically no need of explanatory notes as to what a particular plate illustrates; the condition is self-evident.

To students this atlas should prove especially valuable, giving, as it does, a clear idea of the relations of the parts as met with in various kinds of fractures and dislocations, as well as the appropriate treatment. And to all those who are inclined to be sceptical concerning the clinical value of the Röntgen rays, we unhesitatingly recommend this work, since a careful perusal will in all probability alter their opinion. The atlas reflects the greatest credit not only on the author, but also on the publishers, and in every way it gives to the reviewer the most complete satisfaction.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, M.B., F.R.C.S.; and F. F. BURGHARD, M.D., F.R.C.S. Part I. London: Longmans, Green & Co. 1899.

THE subject of surgery has undoubtedly grown very much in recent years, and has come to trench greatly on what was formerly considered the province of medicine. According to Professor Watson Cheyne and Dr. Burghard, it is now so extensive as to justify the publication of a manual devoted to treatment alone, and the work they have entered on is calculated to extend to six parts or volumes each of nearly 300 pages! On the face of it, the divorce of pathology from treatment does not seem likely to be beneficial, and, in truth, our authors have found it to be impossible. The first part of their work gives "The Treatment of General Surgical Diseases, including Inflammation, Suppuration, Ulceration, Gangrene, Wounds and their Complications, Infective Diseases and Tumours," and these are all subjects which cannot be thought of—cannot be discussed—without dipping deep into pathology. The authors have not shut their eyes to this fact, but the ground-theory of the book (that it is to be devoted to treatment) has made the pathological descriptions incomplete and unsatisfactory. Further, we notice throughout the work a lack of discrimination in the selection of modes of treatment, and the want of a firm hand in discarding methods which have fallen into disuse. We may instance, as an example of this, the paragraphs on the treatment of nævus. The writers remark, "Of excision it may be at once said that it is certainly the best possible method of treatment, and that it should be adopted in all cases where it is possible to carry it out." With this we thoroughly agree; but what we cannot understand is why, holding such views, the writer should occupy five pages in the description of treatment by electrolysis, caustics, and injections.

We can appreciate Mr. Watson Cheyne's admiration for his old teacher, Lord Lister, but we think it a pity that even hero-worship should result in the description of the antiseptic methods, and even the use of the diagrams, of twenty years ago. We are sure that Lister would be one of the very last to approve of this. Certainly in sticking to the use of silver wire sutures and buttons, and in his affection for Lister's needle, he has not even the excuse that they belong to the antiseptic method of which his great master is the apostle and founder.

In some particulars the authors are both sufficiently advanced and commendably definite. Thus, in the section on sarcomatous tumours, they give no suggestion as to the possibility of cure by the injection of mixed toxines, and no word as to the removal by Volkmann's spoon or other means of erasion, and in both respects we are quite at one with them.

The section on anæsthetics is from the pen of Dr. J. Fred. Silk, and is based on a wide experience and sufficient knowledge. It is but natural, perhaps (considering how little ether is used in the West of Scotland), that we should take exception to the "brief against chloroform" which he seems to have taken up, and should object to the substance of the page and a half on the choice of anæsthetic. We gather from the very concise lists he gives under this head, that there are only two conditions under which he would certainly select chloroform—namely, (1) in children under 3 years of age; and (2) in acute or very recent lung trouble. Even in operations on the mouth and tongue, where chloroform is imperative, he uses the A.C.E. mixture to induce anæsthesia, changing for chloroform when the operation is commenced. We think a little more knowledge of what can be done under the use of small doses of morphia and cocaine with salt solution (Sleich's combination) will convince Dr. Silk that the success on the Continent is not due to "difference in type in the patients as compared with those seen in this country."

We find few errors in regard to facts, but we thought that it was an accepted fact that shock was due to vaso-motor paralysis, and not, as herein stated, to "extreme exhaustion of the medulla and spinal cord."

In the formula for red lotion given in the footnote on page 58, spiritus lavandulæ is mentioned, evidently in mistake for the tincture; unless the latter be used the colour cannot be *red*.

Despite the shortcomings and slight errors we have pointed out, we regard the work as a valuable addition to the surgeon's library, and shall await with interest the publication of the succeeding parts.

Asthma: Recent Developments in its Treatment. By ERNEST KINGSCOTE, M.B., C.M. London: Henry J. Glaisher. 1899.

THE merits of this book are sadly to seek. The "study" of "asthma proper" occupies less than half its pages, and is mainly concerned with the relation of thirty-five "illustrative cases," twelve of which are not even instances of the disease in question. It seems that Dr. Kingscote has invented a special pleximeter, by the aid of which he detects, in every case of asthma, the presence of a dilated heart. On the basis of this observation he advocates the view that the asthmatic paroxysm is due to pressure exercised by the enlarged heart upon the vagi. His experience also convinces him that "hay-fever" is caused in exactly the same way, and, anticipating the suggestion that his views as to the effects of cardiac dilatation are somewhat far-reaching, he courageously refuses to "pander, even to professional opinion," and puts the whole blame, if blame there be, upon "the organ itself."

Dr. Kingscote is naturally very much attached to his own observations and theories, and modestly associates them with "Sir Isaac Newton's apple and James Watt's kettle." He informs us that he was first "incited" to "habits of observation" by the brilliant example of a distinguished Scottish professor. The measure of his passion is provided in his preface. In this, Dr. Kingscote mis-spells his exemplar's name, misnames the professor's chair, and attaches the professorial connection to the wrong institution. A most platonic lover this! But whoever may be responsible for Dr. Kingscote's "habits of observation," we feel sure no one will dispute with him the paternity of what he is pleased to call his "theories." Of each of these he may safely and without fear of challenge say, "a poor . . . thing, sir, but mine own."

The "illustrative cases" are a record of the therapeutic triumphs Dr. Kingscote has obtained, mainly by the use of baths and exercises. Some of these triumphs strike us as somewhat extraordinary. In one case, pericardial adhesions were "apparently broken down;" in a second, cardiac dilatation and asthma were successfully overcome by the cure of an "ulcer" of the cervix; in a case of baldness, treatment for dilated heart was followed by a considerable growth of hair, though previously many "infallible restorers" had been employed in vain; in a fourth instance, a "threatening" of hay-fever immediately passed off on the performance of "a few resisted exercises;" from a fifth, "capillary digestion" (whatever that may be) disappeared; whilst there are two instances in which "all the valves were leaking," and yet, under treatment, the heart in each case was restored to normal, and the murmurs disappeared! Does Dr. Kingscote mean gravely to tell the profession that he can remove the murmurs of aortic and pulmonic regurgitation?

One of the two last mentioned patients was so seriously ill that Dr. Kingscote, in commencing treatment, was reminded (for some unexplained reason) of St. Paul, and the apostle's conflict with a venomous reptile. He does not condescend upon detail, but we presume that the part he played was the apostolic one. The alternative is, of course, ridiculous. But what about the patient?

The earlier half of the book merits but brief notice, and is only for those who have time, temper, and labour to lose. Its presentation to an examiner would, we most profoundly hope, bring trouble even to a third year's student.

Of Dr. Kingscote's personal and professional virtues, apart from this book, we know nothing. But at present, at all events, he has not mastered even the elements of authorship. He betrays some partiality for the word "don't." Let him think of this should he contemplate another volume.

Selected Papers on Stone, Prostate, and other Urinary Disorders. By REGINALD HARRISON, F.R.C.S. London: J. & A. Churchill. 1899.

THESE papers have been previously published in the medical periodicals or in the transactions of societies, but we are glad to have them in a collected form. Everything Mr. Harrison writes is worth the permanence which book-form gives, for he draws from a wide experience, and speaks with mature knowledge.

We may commend to the attention of our readers the papers on prostatic disorders, and especially that in which he discusses the effect of vasectomy. It has, we suppose, been the experience of every surgeon that in a few cases the operation acts like a charm, and at once does away with obstruction, septic urine, catheterism, &c., while in other cases it utterly and completely fails. Mr. Harrison substantiates a conclusion arrived at by the writer of this review some years ago, namely, that vasectomy is only of use where the enlargement is general, and is due to hypertrophy of glandular and muscular tissue, and is especially effective where there is a good deal of congestion; when the enlargement is mainly fibrous, or when it is carcinomatous, division of both vasa deferentia appears to do no good whatsoever. Our author points out how immediate is the relief resulting from vasectomy in congestive cases, so that in a few hours after the operation the irritability of the bladder diminishes, and it is only necessary to pass the catheter at longer intervals, or the patient may even be able to pass urine unaided. In summing up his paper he says—"There are some points of much physiological interest which have to be more thoroughly worked out relative to the mechanical disconnection of the male genital and urinary systems in general, and to castration and vasectomy in particular. The former operation, it is probable, extinguishes both desire and power to procreate; vasectomy, on the other hand, appears, from some cases, only to bring the latter to an end through the mechanical occlusion of the seminal canals. It is well that patients should understand this before submitting to either operation, whatever their ages may be."

The condition of patients with extroversion of the bladder is at the best deplorable, and plastic operations to cover in the exposed bladder, even if successful, give but slight relief. Mr. Harrison thinks the most chance of doing good lies in the doing away with the defective bladder entirely. To this end he, in a case reported, removed one kidney by lumbar incision, and, after an interval, transplanted the ureter of the other kidney to the groin by an incision, much like that for ligature of the common iliac artery. No attempt was made to remove the bladder, but after the stoppage of the flow of urine over it, contraction and partial cicatrisation took place. The patient did well for about six months, when hydronephrosis set in, followed by suppurative nephritis, terminating fatally. Mr. Harrison regards the fatal issue as entirely the result of neglect on the part of those in charge of the patient, and especially from the orifice of the ureter being allowed to contract, so that the urine was only expelled drop by drop. He points out that this method of treatment would be available in cases where it was found necessary to remove the bladder for tuberculosis or malignant disease.

The other articles in this volume are all instructive and weighty, and will be found interesting alike to the general practitioner and surgeon.

Encyclopædia Medica. Under the General Editorship of CHALMERS WATSON, M.B., M.R.C.P.E. Volume I: Abdomen to Bone. Edinburgh: William Green & Sons. 1899.

WE have here the first instalment of an ambitious undertaking. Though neither the editor nor the publishers of the work can yet claim to have attained high rank in their respective professions, appearances suggest that they have resolved to make a reputation for themselves by actual merit. They have conceived a great purpose and taken bold steps to bring it to fruition, and it looks as if their aim would be achieved.

There is no preface to this work, or, at anyrate, there is none in this volume. Possibly this is a testimony to the shrewdness of its editor, who may have learned from the experience of others how difficult it is to predict the number of volumes that will be required, a point that the reader of a preface would naturally be curious about. After the title-page we have a list of the principal articles in the volume, with the names of the writers, and then we start right off with page 1 of the text. The contents are not arranged as in "Systems" of Medicine, but in the alphabetical order of their respective headings. The present volume includes 579 pages of text. To show the authoritative character of the articles, the following names of authors, with their contributions, may be instanced:—Abdomen, Clinical Investigation of—Judson Bury; Abdomen, Injuries of, and Abdominal Abscess—James Swain; Abdominal Aneurysm, and Acromegaly—J. Dreschfeld; Abortion—A. R. Simpson; Achondroplasia—John Thomson; Acne—T. Colcott Fox; Actinomycosis—S. Délepine; Adolescent Insanity—T. S. Clouston; Adrenal Glands—H. D. Rolleston; Ainhum, and Beriberi—Patrick Manson; Alcoholic Insanity and Alcoholism—George Wilson; Alkaloids—A. Lockhart Gillespie; Amblyopia, and Asthenopia—George Berry; Anæmia and Pernicious Anæmia—G. Lovell Gulland; Physiology of Anæsthesia and Minor Anæsthetics—Dudley Buxton; Chloroform—Alex. Ogston; Ether—T. Pridgin Teale; Angina Pectoris—T. Lauder Brunton; Aorta (Thoracic), Aneurysm and Dilatation of—Graham Steell; Aphasia—Byrom Bramwell; Appetite—A. Saundby; Artificial Limbs—D'Arcy Power; Aseptic Treatment of Wounds—C. B. Lockwood; Asthma—D. J. Leech; Atrophy, Infantile—H. Ashby; Auditory Nerve and Labyrinth—Dundas Grant; Balneology—Fortescue Fox; Bed-sores—Alex. Miles; Black-water Fever—L. W. Sambon; Blood—T. H. Milroy; Bone—Alexis Thomson.

In estimating the intrinsic merit of such a work as this, we naturally turn to an article by the editor on the subject of "Atrophy." This occupies nearly four pages, and is, we must say, well done. It is not, however, a monograph on the subject of atrophy, but a scientifically accurate dictionary article, summarising the subject in a general way, and only touching upon, or even omitting, much that might have been discussed under such a heading. This may be but another instance of the wisdom of the editor, who restrains himself of set purpose that details may be treated more fully by others under different headings.

Other articles which we have examined are on definite diseases such as beriberi and achondroplasia. These have given us great satisfaction as excellent summaries of our present knowledge of their subjects. Dr. Clouston still writes on adolescent insanity in the style that has made his earlier works so charming to the reader. The other articles, valuable though they be, are too numerous to allude to separately, But if the promise of this first volume continues to be fulfilled in its successors, the whole will be an achievement of which the healing art in Britain may well be proud.

The Cerebro-Spinal Fluid: its Spontaneous Escape from the Nose. By St. Clair Thomson, M.D. London: Cassell & Co., Limited. 1899.

Cases of spontaneous escape of the cerebro-spinal fluid from the cranium are rare, and the phenomenon is not always recognised when it does occur. This monograph, which deals very fully with this very rare pathological condition, should prove highly interesting alike to the physiologist, the rhinologist, and the general surgeon. The author first gives an outline of the history of the subject—the escape of cerebro-spinal fluid from the ears and the nose—and then gives details of a case of the spontaneous escape of this fluid from the nose, which has been under his observation for some years. His patient was a young woman apparently in good health, and who, without any tangible cause, suffered from the escape of cerebro-spinal fluid from one side of the nose, the escape of which produced no other symptom than the mechanical one of inconvenience. The flow, at first intermittent, has, with rare intermissions, been continuous both day and night, for over three years.

The observations, contained in the second part of the work, on the composition and function of the cerebro-spinal fluid in the human subject made by the author, in conjunction with Professor Halliburton and Dr. Leonard Hill, and already published in the *Proceedings of the Royal Society*, are not only of interest, but form a valuable contribution to physiology and physiological chemistry.

The Power of Nature in Disease. By J. WALLACE ANDERSON, M.D. Edinburgh: W. F. Clay. 1899.

IN the *brochure* now before us, which we regret not having had the opportunity of noticing at an earlier date, the author deals with a most interesting subject, especially to those who concern themselves with what we may term the metaphysics of medicine. However interesting, from the historical or philosophical point of view, the doctrine of the *vis medicatrix naturæ* may be, we are quite sure that at the present day it does not help much in the progress of our art, and we are of opinion that but few modern physicians will agree with many of the pathological conclusions to which the author's metaphysical researches have led him. "Our art," says he, "asserts itself to-day as if Nature were a thing of the past. The great mother of us all, at whose feet we have played our little part from age to age, is at last gone, and she has left us—microbes." We can forgive the innuendo, happy in our belief that Nature was never more studied than she is to-day, that her operations were never more keenly observed, and that, as the result of such study and such observation, great benefit has accrued to our art. We have no doubt whatever that Dr. Wallace Anderson would admit this, just as we freely admit that Nature can and often does cure disease. We do not reject the doctrine of the *vis medicatrix naturæ*, but we do refuse to admit that the doctrine represents the whole action of Nature in the economy of disease. The healing power of Nature is but an aspect of Nature's action in the domain of disease, and to limit our view to this aspect alone, especially in the practice of our art, is dangerous. Under certain conditions, it is as much the part of Nature to produce disease, as under others it is its province to heal it; and no study of the relationship of Nature and disease can be satisfactory which does not fully and freely take this into account. To forget this relationship is to form a one-sided idea of disease and its cure. It is no doubt right to keep in mind that hæmorrhage may at times be salutary, an expression of the *vis medicatrix naturæ*, but this in no way invalidates the truth that hæmorrhage is in most instances a hurtful rather than a salutary process. To insist too strongly upon Nature's healing power in such circumstances, is to encourage a mode of practice which leads often to disastrous results.

Dr. Anderson's book is divided into two parts. The first deals with the history of the doctrine, and is, in our opinion, much the best. A clear, we might say an exhaustive, and critical account of the history of the doctrine is given, which will prove most interesting to students of medical history. The second part treats of some of the methods of Nature, which illustrate her power in disease. The methods chosen are Fever, Inflammation, Hæmorrhage, Pain, and Insensibility. Under the heading of Fever we have an examination of the old doctrine that fever is an effort of Nature to expel the disease. On the whole, the author seems to us, to be favourably disposed towards this view, but he is met with frequent difficulties and exceptions to the rule for which he is arguing, and we do not think that he disposes of them very efficiently. To refer to hyperpyrexia as a condition in which "Nature has overreached herself, has overdone her part," is not, in our opinion, to throw much light upon a very dangerous constitutional state, especially when Nature is spelt with a capital "N." Dr. Anderson's speculations on this difficult subject are interesting, but not convincing, and we rejoice to see that even the despised micro-organism is not altogether left out in the cold in the course of them. "We have said that inflammation is fever localised." Surely this is an imaginative mode of defining a most complex phenomenon that will satisfy no student of modern pathology. But we cannot pursue the subject farther. Dr. Anderson has a pleasing style, and we have no doubt that the essay will be read with interest as an exposition of bygone pathological doctrine, which can have but little influence on modern practice.

Two Lectures on the Temples and Ritual of Asklepios at Epidaurus and Athens. Delivered at the Royal Institution of Great Britain. By RICHARD CATON, M.D., F.R.C.P. [Reprinted from *Otia Merseiana.*] 1899.

THESE two lectures form a very valuable contribution to our knowledge of Greek medicine. As the author points out, comparatively little has been done by the English in the matter of investigating the ruins of the Greek temples of medicine, and still less has been published on the subject in our language. This being so, we welcome the publication of his two lectures, based as they are on his personal observations at the scene of the various excavations. The lectures are illustrated by a large number of photographs taken by the author on the spot, and they assist greatly in aiding the reader to understand the detailed descriptions contained in the text. The first lecture describes the Hieron of Epidaurus and the Asklepion at Athens. In the second, an interesting account is given of the retiral of the Asklepian shrines, and the accommodation and treatment of the sick who frequented them. To all our readers who are interested in this department of Grecian archæology, we cordially recommend the lectures.

Our Baby: for Mothers and Nurses. By MRS. LANGTON HEWER. Sixth Edition, revised. Bristol: John Wright & Co. 1899.

IT gives us pleasure to allude to the sixth edition of this well-known book. We have glanced through the volume with some care, and have satisfied ourselves that it is an admirable guide for those for whom it has been specially written.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

NERVOUS DISEASES AND INSANITY.

BY DR. R. S. STEWART.

General Paralysis of the Insane. By Smith (*Journal of Mental Science*, July, 1899).—This is an analysis of 700 cases admitted into the Glamorgan County Asylum during a period of thirty years. The proportion which these bear to the total admissions is one-third higher than that of England generally, though the sex proportion is identical. The disease shows a tendency to increase, most so in the male sex, though in their case the mean age at onset tends to become greater, that of females becoming less. As regards the marriage relation, married men and single women occupy the extremes, the percentage in the former amounting to ·28, and in the latter to only 2. The prevailing mental condition is one of exaltation; but this type is becoming less frequent than formerly, and is being gradually replaced by the type in which dementia predominates. The average duration in the completed cases was twenty-four months, and this tends to become shorter in males and longer in females. The earlier the disease begins the longer it lasts; those attributed to drink have a short course. While the disease tends to diminish in the laborious classes, in the better educated the tendency is distinctly an upward one.

Increase of Suicide. By Ireland (*Journal of Mental Science*, July, 1899).—Dr. Ireland is of opinion that suicide is becoming increasingly frequent in this country, the rest of Europe, and North America, and the cause of this is, he thinks, to be found in the increasing strain to which the nervous system is subjected in modern times, to a greater sensitiveness and irritability, with a diminished power of resistance, owing mainly to a change in religious beliefs in the direction of materialism.

Influence of Maternal Inebriety on the Offspring. By Sullivan (*Journal of Mental Science*, July, 1899). As the result of his observations, this writer advances the following propositions:—

1. Maternal inebriety is a condition peculiarly unfavourable to the vitality and to the normal development of the offspring. Its gravity in this respect is considerably greater than that of paternal alcoholism.

2. While the influence, as measured by the test of infant mortality, appears to be exercised in considerable degree indirectly through deterioration of the milieu, a large part also depends on the primary action of the poison. The reality of this latter mode of influence is evidenced by the tendency to still-births and abortions, and by the high rate of epilepsy in the surviving children, by the prevalent mode of death, by the effects of modifications of the intoxication.

3. This primary influence of alcohol is due in part to the permanent effects of the poison on the maternal organism, inducing a transmissible degenerate condition; in part to a direct toxic action on the embryo, owing to continued excesses during pregnancy and lactation.

4. The first of these modes of primary influence is by its nature permanent, with a tendency to increase. The second mode, while tending also to a constant and constantly increasing operation, is susceptible of temporary augmentation or diminution.

5. Under these combined modes of influence the normal tendency of the family with alcoholic maternity is towards a type the inverse of the syphilitic family; that is to say, the first-born children are normal, then come more or less defective children who live beyond infancy, then children dying in infancy, then still-births, and finally abortions.

6. Deviations from this type are probably due in many cases to oscillations in the intensity of the second mode of influence. Deviations originating in this fashion may be seen, for instance, in the death in infancy of the earliest born children of the family as a result of conception in drunkenness, and in the survival of late born children when the mother has been imprisoned during part of the pregnancy.

The social gravity of female inebriety and the social profit in its removal are evident. In suppressing the female drunkard the community not only eliminates an element always individually useless, and constantly liable to become individually noxious—it also prevents the procreation of children under the conditions most apt to render them subsequently, if they survive, a burden and a danger to society.

Double Centre of Cortical Oculo-Motor Innervation. By Roux (*Archives de Neurologie*, September, 1899).—Normal anatomy, experiment, clinical and anatomo-pathological observation agree in showing that the eye possesses from the motor point of view, as well as from the sensory point of view, two cortical zones of projection. The one, the anterior oculo-motor centre, corresponding to the zone of projection of general sensation (trifacial), has its probable seat in the neighbourhood of the base of the second frontal. The other, the posterior oculo-motor centre, corresponds to the sensory zone of projection (retina) in the neighbourhood of the internal and inferior surface of the occipital lobe.

Each of these centres acts bilaterally, and holds under its dependance not only the muscles innervated by the oculo-motor nerves, but also the orbicularis palpebrarum (facial motor)—that is to say, all the motor apparatus of vision.

Isolated lesion of the anterior oculo-motor centre may produce (*a*) conjugate deviation of the eyes; (*b*) slight troubles of palpebral movements.

Isolated lesion of the posterior oculo-motor centre produces conjugate deviation of the eyes and hemianopsia. Lesion of the angular gyrus acts in the same way through the intermediary of the subjacent fibres proceeding from the internal face of the occipital lobe.

Ptosis of cortical origin may perhaps be due to a simultaneous lesion of the two oculo-motor centres of the same side.

A bilateral and symmetrical lesion affecting the two anterior oculo-motor centres or their fibres of projection produces a clinical picture characterised by abolition of the voluntary movements of the eyes and of the lids, with conservation of co-ordinated reflex movements, adapted or voluntary. These movements are under the dependance of the posterior oculo-motor centres remaining intact.

The Bacteriology of Epidemic Cerebro-Spinal Meningitis. By Netter (*Le Progrès Medical*, 24th June, 1899).—In a great number of the cases that occurred in the Paris epidemic of 1898-99 the diplococcus intra-cellularis meningitidis of Weichselbaum was found. This diplococcus, however, was not that most frequently encountered in the course of the epidemic; the pneumococcus and the streptococcus of Bonome being of frequent occurrence. Further, the Weichselbaum diplococcus occurs in sporadic cases of suppurative meningitis, and it was only in the mild cases in the epidemic that it could be isolated.

Treatment of Exophthalmic Goitre by Injection of Iodoformed Ether. By Pitres (*Le Progrès Medical*, 12th August, 1899).—As a substitute for tincture of iodine, which, though successful in some cases, has had to be abandoned on account of the tendency to the formation of abscesses, M. Pitres has used injections of iodoformed ether in doses of one centimetre every eight days. In all, twelve cases were submitted to this treatment, and there was a speedy subsidence of the symptoms, without the occurrence of any accidents; and in six of the cases which had been followed, the cure was found to be permanent at the end of two years.

PATHOLOGY.

The Experimental Production of Cancer. By H. Lambert Lack (*Journal of Pathology and Bacteriology*, vol. vi, part ii, p. 154).—The author does not conform to the view that cancer depends essentially on an "'outrageous' growth of epithelium provoked by some stimulus such as a parasite, the resulting prolific epithelial growth penetrating into the tissues." He views carcinoma as the result of the entrance of the *normal* epithelium of the body into the lymphatic spaces, and its continued growth therein. In March, 1898, the following operation was performed on each of two rabbits:—"Under ether, the peritoneal cavity was opened, the ovaries grasped, cut open, and the raw surfaces scraped freely with the sharp edge of the knife. The milky juice containing free epithelial cells, thus obtained, was carefully allowed to diffuse through the peritoneal cavity." One animal died within forty-eight hours. The other remained well for nearly a year. It then thinned gradually, became weaker, and two months later was killed, suffering from dyspnœa. On the abdomen being opened, numerous white, hard, roundish nodules were seen in the mesentery. The greatly enlarged liver contained many cysts, and thickly scattered throughout its substance were numerous small white patches, coalescing in places. These patches penetrated the liver substance, and were hard on section. The uterus was greatly thickened, mucous membrane papilliform, and at one place in the wall was a tumour as large as a cherry. The diaphragm was infiltrated with dense whitish tissue, and on its pleural surface were large projecting masses. On the parietal surface of the pleura, and in the lungs, were densely hard, whitish tumours. There was thickening of the pericardium, and the whole mediastinum was occupied by one large mass of tumour-like tissue. Under the microscope, the growths in the liver were seen to consist of alveolar spaces lined by one, or occasionally more layers of columnar epithelial cells; but in many places, in growths from other parts, alveoli seemed almost filled with cells which had lost their columnar shape—"typical structure of a columnar-celled carcinoma, and the tumours have all the characters of an ovarian cancer." The presence of the growths in the pleuræ, &c., as well as in the peritoneal cavity, showed that the lymphatic system had been infected. The author claims that the operation produced the disease.

He bases his theory of cancer, mentioned above, on the following:—

1. Cancer epithelium is identical with the normal epithelium of the body, from which, indeed, it is derived. Atrophy of breast follows oöphorectomy, and, as seen in some cases, atrophy of breast-cancer following oöphorectomy illustrates his view of the histogenesis of cancer.

2. The primary cancer, at anyrate, is simply a long tube or column of normal epithelium invading the lymph spaces, and continually branching from the parent stem or first ingrowth of epithelium.

3. The author refers to a paper of his in the *Lancet* for June, 1896, in which he brought forward cases illustrating implantation of cancer-cells in the wound made during an operation for the cure of the disease. He looks on cancer-cells as infective agents of an infectious disease.

To test his theory, the above operation was performed, and ovarian cells were chosen for the following reasons:—

1. Free cells were readily obtained from the Graafian follicles, and the adjacent peritoneum was a suitable soil for inoculation.

2. "There seems some doubt as to whether the peritoneum has not been occasionally infected with malignant disease by sowing in it epithelium from non-malignant ovarian cysts. Certainly diffuse cancer of the peritoneum has followed removal of ovarian cysts, and especially of so-called papilliferous cysts. The fluid in these cysts contains free epithelial cells, and the explanation universally given, that in cases where this dissemination of malignant disease has occurred, the original cysts were malignant, is, in my opinion, not always the true one."

The paper is illustrated by two plates—one showing tumour mass in the thoracic cavity, the other, microscopic appearances of a nodule in the liver and of the mass in the mediastinum.—G. H. E.

DISEASES OF CHILDREN.

By JOHN LINDSAY STEVEN, M.D.

Thyroidin in the Psychic and Physical Retardation and in Defective Development of Children is recommended most warmly by St. Philippe and Guyot, in the *Annales de Méd. et Chir. Infantiles*, 1898, Nos. 17, 18. One of the five cases described by them refers to a child 2½ years old, which only weighed 9 kg., and was unable to talk yet; also to one 22, and another 19, months of age, who, in spite of the greatest care, resembled children of less than 1 year of age; and two other 3 year old children, one of whom was unable to walk or to talk, the other being rachitic and backward in walking and teething. All of these cases were extremely favourably influenced in their bodily and mental development by the exhibition of thyroidin tablets, beginning with one-third of a tablet *pro die*, which treatment was continued without interruption for months. The initial dose was 0·07 g. of the recent sheep's thyroid (=one-third of a tablet); later, 0·1 g.; and after five or six days, 0·2 g. (=1 tablet) were given, which dose was adhered to with occasional intervals of eight to fourteen days (when excitement was manifested).—(*Pediatrics*, August, 1899.)

On the Action of Thyroid in Tablets.—A contribution on this subject is made by Dr. Wunderlich in the *Munchener Medicinische Wochenschrift*, 1898, No. 47. A child, 3½ years of age, was ordered thirty tablets, each containing 0·3 g., one half of these to be taken twice daily, and after three days increased to one at a dose, for a rapidly increasing struma. On the third day of treatment the child possessed itself of the box of tablets, and ate twenty-two of them. It remained perfectly healthy, and showed no abnormal symptoms whatever. Wunderlich continued to administer the tablets (two a day), and observed a decrease in the tumour, an ointment being applied externally at the same time.—(*Pediatrics*, August, 1899.)

On Syphilis in Children.—Antonelli (*Annales des Médicine et Chirurgie Infantiles*, 1898, 12; *Der Kinderärzt*, 1898, ix, 219), an oculist, according to his experience, believes congenital syphilis to be much more frequent than is usually supposed, and thinks that the oculist and dermatologist had especial opportunity to demonstrate this. In congenital syphilis there is nearly always, if not always, present changes in the fundus of the eye (neuritis optica, chorio-retinitis, &c.), which have already developed in uterine life or in very earliest childhood, and which always leave behind traces which can be demonstrated by the ophthalmoscope. The greater number of cases of congenital syphilis are, however, of a benign natnre, and curable with proper treatment. The changes in the fundus of the eye are for him the most important signs to demonstrate congenital syphilis, or to arrive at a diagnosis in doubtful cases.—(*Pediatrics*, August, 1899.)

On Intestinal Invagination in Childhood.—R. Koch (*Der Kinderärzt*, 1899, x, 49) states that invagination or intussusception of a portion of the intestine into another portion, one of the most important and prognostically most serious of occurrences, is not infrequently met with in childhood, and particularly attacks, by preference, children in the first year of life.

An ileo-cæcal invagination is probably of the most frequent occurrence, namely, the ileum with the cæcum into the colon ascendens, the latter may, however, be invaginated into the colon transversum, even reaching sometimes into the colon decendens, so that occasionally the free end of the invagination makes its appearance in the rectum, and may even protrude from the anus.

The mesentery of the intussusception is naturally also inverted, and hence a rapidly increasing obstruction to the circulation, and a consecutive bleeding from the invaginated portion of intestine is developed. The symptoms of a violent, partial inflammation, painful distensions, which may be felt in exceptional cases as sausage-shaped tumours through the abdominal walls, soon appear. In its further course, a general peritonitis occurs, and fatal collapse, as a rule, ends the terrible affection after a duration of four to eight days.

Exceptionally we may meet with a spontaneons cure, in that the gangrenous portion of the intestine is thrown off, the continuity of the intestine having been previously assured by adhesions. This is very rarely the case, however, and a stricture of the intestine is always left behind in the affected portion, with its threatened dangers.

As a rule, most of these cases, even when the gangrenous portion has been expelled, succumb later on to a general peritonitis, gangrene of the gut, or exhaustion. As regards the diagnosis, which should be made especially early in these cases, there are three prominent symptoms—*constipation, vomiting, passing of blood from the anus.*

As a rule, the disease begins suddenly with pains resembling colic, and the vomiting of the remnants of food, or of mucus and bile; in the beginning the stool is diarrhœal, mixed with particles of food; later, stubborn constipation occurs, and only slimy masses, and, at times, pure blood, is voided through the anus, accompanied by violent tenesmus.

The abdomen, as a rule, becomes tympanitic and extremely sensitive to pressure on the second day; the children present a haggard aspect, suffer with excruciating thirst; the pulse becomes small, thready; and a noticeably rapid emaciation takes place. Occasionally the invagination may be felt in the region of the right iliac fossa, or of the colon transversum, as a sausage-shaped, smooth and movable tumour, especially when no meteoric inflation of the abdomen is yet present. Should the invagination reach as far as the rectum, the intussusception may occasionally be felt by the index finger in the rectum.

As regards treatment, we should avoid purgatives. Above all we may try large enematas of ice-cold water, lavage of the stomach, light careful massage of the abdomen, and internally opium. If reposition of the invaginated portion of the intestine does not soon occur, an early laparotomy, which is not a dangerous operation as carried out to-day, is strongly indicated.

If no inflammatory adhesions have yet formed, the invaginated portion of intestine may generally be withdrawn, and thus the grave symptoms be at once relieved.

If the diagnosis has been made too late, or the operation for other reasons has been postponed too long, adhesions or gangrenous spots have probably already formed on account of the severe venous stasis in the invaginated portion, and a resection of the intestine or other complicated operation will be required, which is usually not well borne by the tender, childish organism, which has already been previously debilitated by the grave disease. According to the statement of various authors, forty-eight hours may be looked upon as the utmost period in which an operation may yet be successfully undertaken. The following case is from Koch's private practice, where the diagnosis was made early, and a child 8 months of age was saved by laparotomy.

On the evening of 14th June, 1895, a man came to Koch from the village of B., with the story that his nephew, a robust boy of 8 months, had been suffering with diarrhœa for about six days, but was otherwise well. The child had suddenly become worse that evening. It was continually screaming with pain, and had vomited several times. The passages, which were fluid, contained mucus, and occasionally blood. From this description Koch took it for granted that the case was one of catarrhal diarrhœa, probably of a dysenteric form.

He ordered ice-water to be given in teaspoonful doses, and cold tea containing cognac; also a mixture of muriatic acid with two drops of opium tincture, besides irrigation with a 2 per cent solution of alum, and a Priessnitz compress over the abdomen.

On the following day he visited the child. According to the relatives, the diarrhœa had ceased, but the child had screamed continuously, and frequently vomited a brownish fluid. Koch found the child looking very pale, collapsed, temperature normal, the tongue heavily coated, the abdomen somewhat distended with gas, and very tender to the slightest touch. Palpation of the abdomen revealed a sausage-shaped tumour in the region of the navel, running obliquely across the abdomen, which could be traced from the left hypochondrium downward to the iliac fossa.

During the examination the child passed about half a teaspoonful of pure blood by the anus, with much screaming.

As the three cardinal symptoms—constipation, vomiting, and the passing of blood from the anus—were now present, the diagnosis of invagination was clear. On passing the index finger into the rectum, the obtuse apex of the intussuscepted gut could be plainly felt. A number of irrigations were carefully made with ice-water, and the abdomen carefully kneaded for the possible reduction of the invagination, but without any result. Laparotomy seemed the only choice after this. The inflation of air and lavage of the stomach did not seem indicated to Koch. The child was, therefore, taken to the surgical clinic in Giessen, and laparotomy performed by Prof. Dr. Poppert on the evening of 16th June, about forty-six hours after the formation of the invagination.

The invagination was easily found, and extended from the middle of the transverse colon down into the rectum. The abdominal cavity contained a large quantity of a reddish-yellow fluid. The peritoneum was greatly congested; no symptoms of purulent peritonitis were, however, present. An attempt to dislodge the invagination by careful traction of the ileum proved unsuccessful, but when the end of the intussusception was at the same time stroked and kneaded, the invaginated intestine could be unfolded; lastly, the cæcum with the vermiform process came into view; we were therefore dealing with a typical invagination ileo-cæcalis, in which the valves of Bauhini formed the basis of the invaginated gut. The child rapidly recovered after this, perfect health only being delayed by a continuation for some time of the intestinal catarrh, so that the patient could not be discharged before 9th July. The child has since continued to develop normally.

The fortunate issue of this grave case is another proof of the correctness of the view that every case of invagination which is not readily reduced by therapeutic measures should be at once transmitted to the surgeon, as we can only hope for a favourable issue through an early laparotomy.—(*Pediatrics*, August, 1899.)

Sarcoma of the Kidney in a Child.—Wanitschek (*Prager Medicinische Wochenschrift*, 1898, No. 52) relates a case as follows:—

The patient is a 6½ year old girl, who had had her left kidney removed for sarcoma two and a half years ago. The mother reports that the patient had been well ever since the operation. It is only within three months that she again discovered an enlargement of the abdomen.

A freely movable tumour, of the size of a child's head, is felt in the left lower region of the abdomen, yielding a partly tympanitic percussion note, in all probability a recurrence of the growth in the lymphatic glands of the mesentery of the colon descendens. The patient is in robust health, the right kidney seemingly does its work well, the urine does contain any abnormal ingredients.

21st September: Operation.—The tumour presented between the two layers of the meso-colon, partly covered by the colon descendens and a few intestinal coils. The latter, as well as the colon, are closely adherent to the tumour in some places. The separation of the first was easily accomplished; the loss of substance caused is easily covered by suturing over it the serosa. This was not the case with the portion of colon. In spite of careful dissection, whole layers of the muscularis remain attached to the tumour, and after the latter had been removed, the greatly damaged piece of gut had to be resected. Union was obtained by ring-suture. The peritoneum and abdominal parietes were closed with deep sutures. The operation lasted one hour, and 70 gms. chloroform were used.

The patient did fairly well after the operation. The temperature suddenly rose, however, on the fifth day; the lower lobe of the left lung presents a pneumonic deposit; on the following day the other side also becomes affected. The parts operated on show no section, and heal well. The lung affection, accompanied by profuse bronchitis, ran a severe course, and only after it had lasted ten days was improvement manifested. 15th October the temperature again rose; the quantity of urine diminished, containing albumin, much blood, hyaline granular casts, epithelium and blood-casts. The symptoms of this acute nephritis increased, and the patient was again in great danger for ten or twelve days. Improvement then occurred; œdema, as well as the pathological ingredients of the urine (excepting a small admixture of blood) disappeared, the appetite returned, strength increased, and the child was returned to its parents on 8th November.

This favourable course is quite notable, especially when we consider the circumstances. The child not only bore a severe intra-abdominal operation twice under chloroform narcosis (on the second occasion, when resection of the intestine was at the same time carried out, only one kidney being present), but it also passed through a grave attack of pneumonia, and a hæmorrhagic nephritis, after the second operation (the cause of the former could not be determined; it might have been a scarlatina nephritis, a case of scarlet fever being in the same room with the patient; it may also be, however, that the sound kidney, which had so far carried on all its functions normally, was unable to bear the additional work which was imposed on it by the pneumonia, which rendered it susceptible to an injury, perhaps by some toxine). What will, moreover, become of the child? The prognosis, in the light of other cases of the kind, is rather unfavourable.

1. A boy, 7 months old, was operated on (25th January, 1893), and died one year later from metastases of the liver.
2. A 2 year old boy died three days after the operation.
3. A 6 year old boy died one year later from metastases to the lungs.

Other operators report a like experience. The reason for this is that the tumours are operated on at too late a period; either the parents do not notice their presence early enough, or the physician overlooks the small tumours in a general examination.—(*Pediatrics*, August, 1899.)

A Case of Laryngeal Spasm caused by Adenoid Vegetations. Boulai (*Archives de Laryngologie*, 1898; *Medical Chronicle*, vol. x, No. 5).—The patient, a child of 6 years, was brought to the author suffering from an almost continuous difficulty of respiration, which culminated at intervals, during the night especially, in attacks of violent laryngeal spasms. The paroxysms began abruptly a month after an attack of diphtheria, for which it was necessary to perform tracheotomy. On examination the larynx appeared normal, except that the epiglottis during inspiration became curled into a species of V, the two halves of which almost met and nearly closed the laryngeal aperture. The only other noticeable abnormality in the upper respiratory tract was the existence of a moderate accumulation of post-nasal adenoids. At the first interview the post-nasal space was not explored with the finger; but at a later date this procedure was adopted, with the curious result that the laryngeal crisis disappeared almost entirely for fifteen days. Finally, tho adenoids were removed; the attacks of spasm then abruptly ceased, the difficulty of breathing vanished, and no relapse had occurred up to the time of publication. The author concludes that the spasm was purely reflex, and caused by irritation conveyed from the glandular overgrowths in the naso-pharynx.—(*Archives of Pediatrics*, August, 1899.)

GYNÆCOLOGY AND OBSTETRICS.

By E. H. LAWRENCE OLIPHANT, M.D.

Dystocia after Vaginal-fixation of the Uterus.—In a paper reported some months ago in this *Journal*, Dr. John Edgar mentioned a case in which he had performed vaginal-fixation of the uterus, and had to deliver the patient in a subsequent labour by Cæsarean section. Dr. Dietrich, of Bonn, relates a similar case in the *Centr. f. Gynæk.*, 12th August, 1899. The patient was operated on in 1895 by Fritsch, who performed vaginal-fixation of the uterus after pessaries had failed to rectify a retroflexion. The operation presented no difficulties, and the patient made a good recovery. Afterwards, however, she had two attacks of pelvic peritonitis previous to her pregnancy, which began in December, 1897. In the early months patient suffered from vomiting, with severe abdominal pain, and in the sixth month she suffered from hæmorrhage and other symptoms of threatening abortion; and on examination at this time, the promontory of the sacrum, and the os uteri beyond it, could be reached only during complete anæsthesia; the pelvis was filled by the lower part of the uterus, which was doughy and œdematous. On admission to hospital in August, 1899, the patient was in labour, with the os uteri in the position previously found. Dr. Dietrich accordingly determined to do the Cæsarean section to effect delivery, and in the hope of freeing the adhesions and so relieving the woman from the unfavourable results of the vaginal-fixation. The uterus was sufficiently exposed with some difficulty, on account of its immobility, and the incision had to be made transversely, and behind the tubes. The muscle wall in this region was found to be thin. The peritoneum formed no utero-vesical pouch, and the anterior surface of the uterus was adherent downwards. The adhesions were freed with the knife for about a handbreadth. Septic peritonitis unfortunately set in, and the patient died. The *post-mortem* showed an acute anteflexed condition of the uterus, with the cervix adhering to the anterior uterine wall. The cervix was much thinned out, and in its lower part could scarcely be distinguished from vagina. The long axis of the uterus was much shortened.

The paper is largely taken up with a discussion of the possible explanation of this sequence of events, and on the technique of the operation for vaginal fixation, which he blames for lighting up old peritonitis. Dr. Dietrich thinks that a vaginal Cæsarean section should have been preferred, but at the time he thought he could better control the hæmorrhage and free the adhesions.

In the same number of the *Centralblatt*, Dr. Fuchs, of Dresden, describes a somewhat similar case. The patient was viii-para, 45 years of age. Her last confinement had been six years previously, but about a year ago a left-sided tubal pregnancy was removed *per vaginam*. In the course of the operation the front wall of the uterus was so wounded that the operator decided to perform vaginal-fixation, and this was done without a special peritoneal suture. In the succeeding pregnancy the early months were not specially remarkable, but in the last four months there were troublesome bladder symptoms. During labour there was serious hæmorrhage. On examination, the fœtal head was found above the pelvic brim, and the uterus was tonically contracted, and projected forward as in a "pendulous belly." Vaginal examination revealed a condition closely resembling that described in the previous case. The anterior portion of the cervix could not be brought down; a catheter did not clearly indicate the position of the bladder, and the uterine contractions threatened to tear the vaginal walls. Dr. Fuchs accordingly determined to exclude the vaginal operation in favour of classical Cæsarean section. The uterus was found, during the operation, with the right round ligament only two finger-breadths above the symphysis, and the whole organ was greatly increased in its antero-posterior dimensions; this, in the operator's opinion, entailed a longitudinal incision instead of the transverse which he prefers. The patient made a good recovery after an attack of cystitis.

The Inguinal Canal as an Approach to the Abdominal Cavity in Gynæcological Operations.—Under this heading the *New York Medical Journal* has an editorial in the number for 5th August, 1899, which is of interest in relation to the two cases abstracted above. The editor refers with approval to a paper by Dr. Goldspohn, who condemned many of the methods of fixing displaced uteri, on the ground that these procedures often gave rise to trouble in future labours. He excepted the Alexander-Adams' operation of shortening the round ligaments; but Dr. Goldspohn practises an extension of this operation, dilating the internal abdominal ring, if only for exploratory purposes. He is thus enabled to free the annexa if there are adhesions, remove the fallopian tubes with or without the ovaries, raise and suspend a prolapsed ovary, or effect salpingostomy. In one case he removed a tubal gestation sac, leaving the ovary, the only one the woman had. He always closed the wound as after a Bassini operation for hernia, and thereby "we not only avoid the supervention of hernia, but incidentally cure a number of inguinal herniæ that are impending or are fully developed." Dr. Goldspohn has operated sixty-five times without a death. The editor recommends this method to surgeons who have conservative tendencies.

Alexander-Adams' Operation of Shortening the Round Ligaments.—Dr. Schulz, of Hamburg (*Brun's Beiträge*; quoted in *British Gynæcological Journal*, part lviii), shows from the ample experience of the Hamburg Hospital what excellent results are to be attained by shortening and fixation of the round ligaments; of fifty-four cases kept under observation, fifty-three were cured of their ailments.

Since vagino-fixation has been generally abandoned, the various methods of exposing the round ligaments at the external ring of the inguinal canal, and, after suitable shortening, securing them to the abdominal wall, have been more widely adopted, and especially so since Lang, of Kocher's clinic, showed that it was easier to find and lay hold of them by opening the inguinal canal; and Kocher pointed out that it was easier to set up the uterus if the traction was directed outwards towards the anterior superior spines of the ilia. Even after conception the uterus preserved the good position given by the operation. From Schulz's experience, no disturbance of the natural course of labour is to be anticipated, indeed, in one case the operation cured sterility.

Rumpf describes his own scientifically elaborated technique in the *Archiv. f. Gyn.*, lvii, 424 (quoted in *British Gynæcological Journal*). The round ligaments and inguinal canals are exposed by a curved incision; the ligaments are shortened 10 to 12 centimetres, and greater security against hernia is obtained by accurate stitching. He adopts Bassini's principles of keeping the processes peritonei well in the background, bringing a solid muscular layer forwards and stitching the aponeurosis carefully. In seventy-five cases he found the ligament every time; a ligament broke in three instances. No relapse occurred in fifty-three cases kept under observation.

Roncaglia has also a paper on this subject in the *Annali di Ost. e Gin.*, March, 1899 (quoted in *British Gynæcological Journal*). Dr. Roncaglia has operated on fifty-eight cases, and concludes from his results that the operation is easy and safe; there are no bad after-effects as regards dystocia or hernia even when the whole ring is split up. The operation does not, however, cure inflammatory disease of the endometrium or uterine parenchyma, which should be cured before the ligaments are shortened.

Vomiting of Pregnancy.—Dr. Buford (quoted in *New York Medical Journal*, September, 1899) suggests that this condition is due to a poison, probably a leucomaine of the uric acid group, and that the treatment should consist of thorough lavage of the stomach thrice daily with alkaline antiseptics, along with baths, massage, and open air exercise in addition to regulation of the diet.

Dr. Dow, quoted in the *New York Medical Journal* for August, is less heroic, recommending a cup of strong coffee—without sugar or cream—an hour before rising.

Massage of the Abdomen in Deficient Lacteal Secretion.—Schein (*Jour. de Médicine de Paris*; quoted in *New York Medical Journal*, August, 1899) lauds massage of the abdomen to promote milk secretion. It should be practised daily for half an hour or an hour, the movements being made upwards from the pelvis to the breasts. This may be associated with the massage of the breasts themselves.

Accident with Obstetric Forceps.—Dr. Mallins, in the *Lancet*, August, 1899, relates the case of a primipara in labour. The forceps was applied to the fœtal head, but the blades would not lock ; on attempting to take them off for re-application, one blade would not come off. Fortunately, delivery was spontaneously effected, when it was found that the blade had passed over an arm which was through the fenestrum as far as the elbow. The arm was partially paralysed for some days, but recovered power.

Cæsarean Section, or Accouchement Forcé after the Mother's Death (*New York Medical Journal*, August, 1899).—The editor discusses this question, and advises the practitioner to be careful to take special precautions before doing the Cæsarean section, even on a woman supposed to be dead. The *Journal* refers more especially to a case in which Dr. Colle (*Echo Méd. du Nord.*, June, 1899) performed the operation on a woman who had fallen dead, in his presence, with symptoms of pulmonary embolism about a week before the expected date of her confinement. He had to go home to fetch the necessary instruments, and fifteen or sixteen minutes elapsed before he got back to the dead woman. He rapidly incised the abdominal and uterine walls, and delivered a child which, though cyanotic, soon began to breathe and was saved. Dr. Colle, however, was troubled by whispered rumours that he had caused the mother's death. At the meeting reported in the journal quoted above he cited instances of women, supposed to be dead, who had regained consciousness during the operation. He therefore inclined to think that forced delivery should be preferred, for it could be performed at once, and the woman, if not really dead, might be saved as well as the child, while the accoucheur's reputation was safe also. His audience agreed with him, and Professor Tarnier was quoted as having called attention to the time necessarily wasted in explanations and obtaining consent of friends, whereas the forced delivery could be commenced forthwith. The editor agrees with this view, more especially as no instruments are required.

Mammary and Parotid Gland Substance in Gynæcology.—Dr. Shober (in the *American Journal of Obstetrics*, February and September, 1899) again recommends the administration of mammary gland substance in cases of uterine fibroids. In a number of cases he has found the tumours diminished in size and the hæmorrhage cease. The dosage is about 20 grains of fresh gland given three to six times daily. Similarly, the exhibition of parotid gland substance has relieved dysmenorrhœa and ovarian neuralgias, and even reduced enlarged and congested ovaries. The dosage is three to six tablets a day of 2 grains each of fresh sheep's parotid.

Parotid Gland Extract in Ovarian Disease.—Dr. Mallet (*New York Medical Journal*, August, 1899) says he was led to use this remedy by reading Dr. Bell's paper read in Edinburgh, 1896, and, subsequently, Dr. Shober's paper. He reports twenty cases in which the parotid extract was used. In five of these the chief symptoms were dysmenorrhœa with ovarian pains. This was associated locally with large tender prolapsed ovaries. Ordinary local treatment was also continued, and these patients did well. Two other cases were unbenefited by the routine douching and tamponading, but were quickly relieved by the parotid extract. In cases of retroversion with adhesion the results were gratifying, as the pelvic exudations were absorbed so that the uterus could be raised. The only counter-indication so far met with seemed to have been the artificial menopause following removal of the uterine appendages. In these cases the flushings and other symptoms were aggravated.

Antero-Posterior Positions of the Head as a Cause of Difficult Labour.—Dr. R. G. M'Kerrow (*Obstetrical Transactions*, London, 1899, part ii) contributes a paper on this subject. The writer has met two of these unusual cases in his practice, and thinks them important, as this form of dystocia is inadequately described in most text-books.

The first case was that of an xi-para whose previous labours had been difficult. In the labour described she was seen by Dr. M'Kerrow after she had been a considerable time in labour with strong pains. On examination the head was found to be free above the pelvic brim; the os was about 2½ inches in diameter and dilatable. The patient was becoming exhausted. The head lay with the occiput anteriorly, the saggital suture running almost directly backwards. The forceps was applied without result; on more thorough examination the anterior fontanelle was found lying above the promontory. Accordingly, the forceps was reapplied, and by its help the head was rotated into the oblique diameter of the pelvis. The head with moderate traction passed the brim, and the labour was with ease concluded. The child, however, did not cry, though it breathed, and died three days later. There was no *post-mortem* examination.

The second case was that of a woman aged 38, ii-para. The previous labour was protracted, and terminated by forceps. After being a day in labour in this second confinement, examination showed her to be in a similar condition to the woman described above—that is, the head of the child was movable above the brim. The os was about the size of a crown piece, and dilatable. The posterior fontanelle was low in front and slightly to the left. The patient was accordingly left for a time to nature, but no progress was made. Later the head was found to be lying with the posterior fontanelle in front of the centre of the os and an inch from the symphysis. The anterior fontanelle could be reached only under anæsthesia, and was found half an inch above the promontory. The antero-posterior position of the head was easily made out. The forceps was applied, and rotation into the oblique diameter effected before traction was attempted. Delivery was easy. Unfortunately this child also died, surviving only two days. A *post-mortem* examination revealed extensive hæmorrhage in the subdural space; the lateral ventricles also contained sero-sanguineous fluid; there was no fracture of the bones. In this case the brim of the pelvis was found to be small and rounded. The author refers to Ramsbotham as one of the few writers who seem to appreciate the importance of rectifying the malposition before beginning to deliver. Dr. Stephenson also is quoted as advocating this use of the forceps to rectify this malposition of the head. The mothers both made good recoveries.

The Value of Antistreptococcic Serum in the Treatment of Puerperal Infection. Report of the Committee of the American Gynæcological Society (*American Obstetrical Journal*, September, 1899).—This valuable report entirely condemns this method of treatment. Among the conclusions arrived at we find the following:—

Clinical observation has shown that the results obtained by its employment leave a great deal to be desired, and apparently indicates that it has little, if any, effect upon the general course of streptococcic puerperal infection.

The results of laboratory work have been extremely conflicting, and have cast grave doubt on the whole subject.

The only positive fact which has thus far been satisfactorily demonstrated is the possibility of markedly increasing the virulence of streptococci by appropriate methods. Thus far, the only definite result of Marmorek's work is the development of a method by which we can increase the virulence of certain streptococci to an almost inconceivable extent.

The committee unhesitatingly condemns curettage and total hysterectomy in streptococcic infections after full time delivery, and attributes a large part of the excessive mortality in the literature to the former operation.

In puerperal infections a portion of the uterine lochia should be removed by Döderlein's tube for bacteriological examination, and an intra-uterine douche of four to five litres of sterile salt solution given just afterwards. If the infection be due to streptococci the uterus should not be touched again, and the patient be given very large doses of strychnia and alcohol, if necessary. If the infection be due to other organisms, repeated douchings and even curettage may be advisable.

Books, Pamphlets, &c., Received.

A Handbook for Nurses, by J. K. Watson, M.D. Edin. London: The Scientific Press, Limited. 1899. (5s.)

Surgery: A Treatise for Students and Practitioners, by Thomas Pickering Pick. London: Longmans, Green & Co. 1899. (25s.)

Raynaud's Disease (Local Syncope, Local Asphyxia, Symmetrical Gangrene): Its History, Causes, Symptoms, Morbid Relations, Pathology, and Treatment, by Thomas Kirkpatrick Monro, M.A., M.D. Glasgow: James Maclehose & Sons. 1899.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second Series. Vol. IV: D—Emulsions. Washington: Government Printing Office. 1899.

Introduction to the Outlines of the Principles of Differential Diagnosis, with Clinical Memoranda, by Fred. J. Smith, M.A., M.D. London: Macmillan & Co., Limited. 1899. (7s. 6d.)

The Johns Hopkins Hospital Reports. Vol. VII: Operations on 459 Cases of Hernia in the Johns Hopkins Hospital from June, 1889, to January, 1899, by Jos. C. Bloodgood, M.D. Baltimore: The Johns Hopkins Press. 1899.

The Pathologist's Handbook: A Manual for the *Post-mortem* Room, by T. N. Kelynack, M.D., M.R.C.P. London: J. & A. Churchill. 1899. (4s. 6d.)

Die Eiterigen Erkrankungen des Schläfenbeins nach klinischen Erfahrungen dargestellt, von Dr. Otto Körner. Mit 3 Tafeln und 20 Textabbildungen. Wiesbaden: J. F. Bergmann. 1899. (7s.)

Dermatologische Zeitschrift, herausgegeben, von Prof. Dr. O. Lassar. July and August, Band. VI, Heft. 3 und 4. Berlin: S. Karger. 1899.

Ueber epitheliale Gebilde im Myometrium des fœtalen und kindlichen Uterus einschliesslich des Gartner'schen Ganges, von Dr. Robert Meyer, in Berlin. Mit 36 Abbildungen in Text und auf 11 Tafeln. Berlin. S. Karger. 1899. (5s.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FIVE WEEKS ENDING 23RD SEPTEMBER, 1899.

	Week ending				
	Aug. 26.	Sept. 2.	Sept. 9.	Sept. 16.	Sept. 23.
Mean temperature, . .	67·2°	59·2°	57·9°	55·5°	51·4°
Mean range of temperature between day and night, .	24·2°	14·6°	15·3°	17·3°	12·3°
Number of days on which rain fell, ...	1	5	3	4	6
Amount of rainfall, . ins.	0·11	1·0	0·19	0·62	1·23
Deaths registered, . . .	356	329	372	317	271
Death-rates, ...	25·2	23·3	26·4	22·5	19·2
Zymotic death-rates, . .	8·1	7·5	8·7	6·4	4·6
Pulmonary death-rates, .	3·3	5·2	4·0	4·2	4·4
Deaths—					
Under 1 year, . . .	138	119	138	92	70
60 years and upwards, .	64	53	43	60	45
Deaths from—					
Small-pox, ...	...	...	...	...	...
Measles, ...	12	3	5	4	3
Scarlet fever, . . .	5	5	5	1	6
Diphtheria, ...	3	...	1	2	1
Whooping-cough, . .	4	6	8	4	...
Fever, ...	8	6	6	9	5
Diarrhœa, ...	82	86	98	69	50
Croup and laryngitis, .	1	...	...	1	...
Bronchitis, pneumonia, and pleurisy, ...	32	28	45	33	37
Cases reported—					
Small-pox, ...	...	...	...	...	...
Diphtheria and membranous croup, ...	13	4	6	8	10
Erysipelas, ...	16	17	18	24	17
Scarlet fever, . . .	98	89	109	137	116
Typhus fever, ...	...	...	...	...	...
Enteric fever, ...	36	35	37	50	36
Continued fever, . . .	...	...	...	...	...
Puerperal fever, . . .	3	1	2	2	1
Measles,*	115	91	51	53	89

* Measles is not notifiable.

Sanitary Department,
Glasgow, *27th September, 1899.*

THE

GLASGOW MEDICAL JOURNAL.

No. V. November, 1899.

ORIGINAL ARTICLES.

ON THE CHANGES IN SURGICAL THEORY AND TREATMENT IN THE PAST TWENTY-FIVE YEARS.[1]

By HENRY E. CLARK, M.R.C.S.,
Professor of Surgery in St. Mungo's College, Glasgow.

In seeking for a subject on which to address you this evening, I am struck by the difference in my position from what it would have been had I been called on to deliver a like address five and twenty years ago. Then there were a dozen subjects on which it seemed as if I had a special title to speak—on which I had special knowledge, and (apparently) had received a special revelation; now it seems doubtful if I have *one*. As age advances and experience ripens, each earnest man feels less and less certain of his generalisations, and requires to add to each such saving clauses and exceptions as materially weakens its force, until he begins to doubt if his opinions are worth publishing, and to question if he has indeed a "message for the ages." The limited knowledge of the young man leads to self-assurance, and he is convinced that what he has to say is both new and valuable; while to his elder, who has wider knowledge, it is neither. You will excuse me, therefore, if, instead of speaking of discoveries or new truths, I speak of experience, and endeavour to show what have been the changes in surgical theory and practice during the years I have held an appointment in connection with a hospital.

---

[1] Being the Presidential Address delivered at the opening meeting of the Glasgow Medico-Chirurgical Society, 6th October, 1899.

And first, as to the hospital with which I have been associated. In the progress of surgical science and practice the adaptation of our hospitals to new requirements and conditions has played an important part, and our wards, our operating theatres, our nursing arrangements, and our accessories have undergone perpetual change. While I hold it true that the rebuilding of the Royal Infirmary on the most approved plans is an urgent need, and cannot be set about too soon, I gratefully acknowledge the readiness with which the managers have in the past listened to our demands, and the earnest desire they have shown to accede to them. The structural alterations, if taken alone, have been great and highly beneficial, as none can deny who remember the small-pox ward in the basement of the east house, the stairs at the ends of the old medical house, and the divided wards in the main east building. The provision of the several operating theatres, though of more recent date, equally testifies to the progressive spirit of the managers.

In the matter of nursing, the improvement has been even more marked. In the old days it was not uncommon to have nurses who could neither read nor write, and who, consequently, ran no inconsiderable risk of giving the wrong medicine to the wrong patient. Faithful, hard-working women many of them were, willing to sit up all night with a "bad case" after having been on duty all day, and prepared to scrub a floor or tend a patient as might be required, but totally unfit to observe symptoms or even to take temperatures. My memory holds note of many women of the servant-girl class whose self-devotion and industry in our wards were beyond praise, and I yield to none in my admiration of them. But very many were drunken, immoral, and totally untrustworthy, and I rejoice that our nurses are now drawn from a higher social level, and that they have so largely been relieved from menial work. Next in importance to the skill of the surgeon is the capacity of the nurse, and I am satisfied that sound education and good intelligence are necessary if we are to get the fullest advantage from wide and thorough training; and only by such training can a well-equipped nurse be produced. No doubt we are accused of training them too highly and treating them too well, so that, on the one hand, they regard themselves as more essential than the medical attendants, and, on the other, are readily withdrawn from nursing by social and other calls. There is some truth in these objections; but, having had plenty of experience of uneducated and well-educated nurses, I have no hesitation in saying that education (to use a mathematical phrase) "raises a nurse to a higher power," and makes her a more effective instrument for good in the hands of the surgeon.

Of all the circumstances I can mention as influencing the progress of surgery in the past quarter of a century, the development of the antiseptic theory and practice has been—far and away—the most powerful. Its influence has been all-pervading, and even the questions of nursing, hospital construction, hospital management, the manufacture of instruments, and the teaching of students, have been and are being affected by it. I have said the *development* rather than the *origin*, for antiseptic treatment was originated by Lister a good few years before my story commences; but its development has been, in the main, a matter of the last twenty-five years. I have said that its influence is all-pervading, and it will be admitted that there is scarcely any department of surgical work unaffected by it. Sir William Savory, in the early days of the antiseptic controversy, published statistics to show that his results under old methods were as good as those of the most advanced advocates of antisepticism. In that paper he expressed the opinion that cases of strangulated hernia should be excluded from such statistics, on the ground that the recovery of the patient depended entirely on the condition of the bowel, and not on the kind of dressing used. In this there was much apparent truth; yet the statistics of strangulated hernia show a progressive diminution of mortality under antiseptic treatment, and it must be apparent to the judicial mind that a wound which heals without suppuration must result in a more rapid cure, cause less risk to the patient's life, and give a better cicatrix than when the wound is septic. Again, it might be thought that simple fractures were "outwith" the domain of aseptic and antiseptic work; but, besides the question of the condition of our hospital wards, and its influence on the process of healing, there is the fact that irregular and badly-displaced fractures are now treated (under aseptic conditions) by free exposure and the use of sutures.

It thus appears that the discussion of all the changes in surgical theory and practice brought about by Lister's doctrine involves little less than a complete treatise on surgery, and this I am not prepared to inflict upon you this evening. It will suffice that certain salient examples should be put before you. Indeed, I shall not attempt to discuss the basis on which antiseptic practice rests, having reason to assume that you are quite familiar with it; and to save wearisome repetition I shall avoid as much as possible referring to it, leaving you to judge how far the changes in surgical practice described have been influenced thereby.

The first notable feature is the enormous increase in the number of operations performed. In private practice this has been largely instrumental in producing the constantly increasing number of "nursing homes," so admirably conducted, and for the most part so successful. The impetus given to operative work by the improved results obtained influences not only those who adopt the newer methods, but also those who stick by the old ways, and encourages alike operations where asepticism is everything and those in which it is of minor consequence. While making the statement that such an increase is acknowledged as having taken place in private practice, we can give no statistical confirmation of the fact. In hospital work it is otherwise, and on turning up the annual reports of the Glasgow Royal Infirmary I find that in the year 1873 the total number of operations performed (major and minor) was 397; in 1874 it jumped up to 542, and since then has been steadily rising; last year (1898) it reached the large total of 2,053, being more than five times the number recorded in 1873. Out of the total operations in the year 1873 a large proportion were amputations—195 out of the total of 397—while in the year 1898 the amputations were 239 out of a total of 2,053. It is noticeable that there is an increase, not a reduction, in the actual number of amputations performed; whereas we might expect that cases in which formerly amputation was considered necessary would now be treated by conservative methods, and thus amputations would get less frequent. That is no doubt the case; but we are dealing with a much larger "turnover" in the later year, and it must not be forgotten that more than half the major operations are for crushes so severe that no question of treatment without amputation can be entertained.

Last year (1898) the total number of patients treated in the surgical wards (including burns) was 4,123, so that, with 2,053 operations, about every second patient was operated on. In my own wards I think the proportion of cases operated on is somewhat greater than this. A few weeks ago I noted the fact that in my chronic ward three patients were awaiting operation, and every patient besides these had undergone operation; and this is by no means a rare experience.

It would seem as if we were fast coming to a time when the knife will be regarded as the appropriate treatment for all surgical conditions; and it cannot be denied that this useful agent is sometimes employed without a patient trial of other (perhaps less heroic) means of treatment.

I would that with this increase in operations I could speak of a decrease in mortality; but the figures seem to be against this comfortable conclusion. The general statistics of the hospital are of no use for the purposes of this comparison, as they include burns, the mortality from which is usually very high, and varies very greatly from year to year. For some years past we have received from time to time special statistics of the cases treated by each surgeon. These have not appeared with perfect regularity, and, being intended for the private information of the members of the staff, cannot be put before you in the form in which they were originally given. The earliest year I have kept the statistics of is 1881, when the surgeon whose mortality was highest stood at 4·4 per cent, the lowest at 2·1 per cent, the latter being 0·4 per cent below that of the general population of Glasgow! In 1897 (the latest I happen to possess) the highest mortality was 11·08 per cent, and the lowest 5·9. Burns, cases of venereal disease, and those under the charge of the "specialists" are excluded in both years. It will be seen that in the latter year the lowest mortality was 1·5 above the highest of the former year. This is another example of the familiar fact that statistics can be made to prove anything. Our surprise at the apparent discrepancy is much diminished if we bear in mind two circumstances. The first is that in recent years the pressure on the surgical wards has been such that trivial cases could not be taken in, or, if admitted, had soon to be dismissed, to make room for more serious cases. The second is that a number of risky cases, such as those of intestinal obstruction, pyloric carcinoma, brain cases, tumour of the kidneys, of the bladder, &c., which were formerly treated in the medical wards, have in later days been transferred to the surgical wards for operation. Many who would, under the old *régime*, have been sent home to die, have under the new conditions been submitted to operation; in such cases the mortality is necessarily great, but many lives are saved which without operation would inevitably be lost.

While on the question of mortality, I may remind you that Dr. Thomas's statistics and those of Dr. Fleming demonstrate that there has been a great drop in the number of deaths after amputation. The *Royal Infirmary Reports* show that in 1874, with 542 operations, there were 73 deaths, of which 51 were after amputation; in 1898, with 2,053 operations, there were 170 deaths, of which only 22 followed amputations, although, as stated above, the amputations were more numerous. These figures not only show a remarkable reduction in the mortality after amputations, but a still more remarkable one in that from operations generally; but from the greater number of the operations there come to be nearly 100 more deaths, and this accounts largely for the rise in the general surgical mortality.

Another feature of surgical practice in recent years is the readiness with which patients and their friends assent to operation. One still meets now and then with the parent (generally one who hails from the "Emerald Isle") who insists that his child shall "go to heaven with her leg on." But for the most part permission is granted with a charming confidence in the surgeon and an abounding faith in the miracles that surgery can accomplish. Nay, more, the friends of patients are generally very willing to give the surgeon a blank cheque on the Bank of Confidence, permitting him to do whatsoever pleases him. This facility is not without its dangers, both to the surgeon and patient, and is sometimes embarrassing. It has fallen to my lot more than once to lose patients to whom I have given advice that an operation was not necessary, and to find the credit and fees pass to a less scrupulous practitioner.

Not only have operations increased in number, they have also increased in extent, and patients are found to emerge successfully from an amount of cutting and carving which some years back would have seemed incredible. In dealing with neuralgia, for instance, what interference with delicate nerve plexuses and ganglia, with the arterial supply of important structures, and even with the brain itself, is not involved in the excision of the Gasserian or Meckel's ganglion! Yet, the mortality has not been exceptionally high. In operations for scirrhus of the female breast, also, the tendency to still wider and wider area of operation is one of the features of the surgery of the day. Twenty-five years ago it was not quite decided whether it was necessary to remove the mammary gland as well as the tumour; even those who advocated complete removal did so because the gland had already shown itself a fit soil for cancerous development, and not because they considered the cancer a local disease. Next came a period when we removed lymphatics and glands only if obviously enlarged, and then we reached the stage of clearing out the axilla whether the glands were enlarged or not. Under the influence and example of many surgeons, but especially of Halsted of the Johns Hopkins Hospital, we are now taking away all the skin covering the mamma, about two-thirds of the pectoralis major, and the axillary fat with the contained glands. Not satisfied with this, however, Halsted himself has in recent cases removed the whole pectoralis major, the glands of the axilla, and posterior triangle of the neck, in one or two cases dividing the clavicle, and taking away greater part of the pectoralis minor. We might think the course of operations could no further go, but Lister suggested many years ago the wisdom of amputation at the shoulder, or above the scapula, to ensure a thorough and complete operation, and this suggestion has in a few cases been carried out.

This development is worthy of consideration on other grounds than the mere question of the endurance of patients and the possible extent of operation. It marks a new and very important departure in pathology. The ground upon which such operations are being done in breast cases is that carcinoma is at the outset a purely local disease, and that, if thoroughly and effectively removed, a cure will be effected. The common teaching used to be that there was a constitutional taint or liability, and that local injury or irritation caused this liability to be locally manifested. In proof of this, much stress was laid on hereditary predisposition or the transmission of cancer from parent to child, and on the occurrence of the disease simultaneously in several organs or tissues. Even Syme, who constantly urged the necessity for wide removal, could not free himself from these ideas. In speaking of cases where glands were implicated, he says[1]:—"It is also incumbent on the surgeon to search very carefully for glands in the course of the absorbents that may have become affected, since it appears that the result of operations for carcinoma, when the glands are affected, is almost invariably unsatisfactory, however perfectly they may seem to be taken away. The reason for this probably is, that the glands do not participate in the disease, *unless the system be strongly predisposed to it*, and consequently their removal, however freely and effectually executed, cannot prevent the patient's relapse." Now, it must be admitted that much depends on the results of operation as offering proof of the one position or the other. A former colleague once said to me, in regard to a scirrhus—"You may do whatever operation you please; you may remove as much or as little as you please, the result will be the same, the disease will recur." That is not the view now held; it is not the view I could myself defend. As far back as 1867, Moore, of the Middlesex Hospital, one of the most widely experienced surgeons in the treatment of cancer, announced his conviction as to the local origin of the disease, but his views were scouted by surgeons generally. Now they are very generally accepted. Halsted, in a paper published about a year ago, stated that, as the result of his very extensive removal operation, 52 per cent of his cases had no recurrence within three years, and other surgeons have published statistics little inferior to these. Volkmann has suggested that cases where there is no recurrence within that term may be regarded as "cured." It must, however, be admitted that the proof of the essentially local origin of cancer is not yet as positive as we would like. The period of three years is too short to be certain of a cure, the numbers in the statistics are too small, and we have still to face the facts as to the occurrence of cancer in members of the same family for several generations, and those cases where there are multiple simultaneous growths. If, however, we get the disease arrested in 50 per cent of our cases for more than three years (and cases are on record of some of these going on for ten more years without recurrence) we have gained much; sufficient certainly to justify the largest operation.

---

[1] *Principles of Surgery*, by James Syme, fifth edition, 1863, p. 80.

The question of suppuration, its causation and prevention, bulked largely in the minds of the workers in pathology and surgery twenty years ago. Those of us who remember the extensive suppuration which took place in wounds in the days when we were dressers in the wards, and who have not forgotten the almost universal prevalence of pyæmia and septicæmia, can appreciate the change which the years since then have brought about in this respect. We no longer speak of "laudable pus," or regard suppuration as a necessary condition of our operations, and I presume we are all at one in considering suppuration to be impossible without the presence of pus micro-organisms. Some few writers assume that in thoroughly aseptic conditions no true *inflammation* is possible, but here they seem to me to carry their conclusions beyond the warrant of circumstances. In the early controversies as to septicism, Lister's opponents always attempted to pose him by saying, "Show us these germs you talk about so much;" and I have a vivid remembrance of a former teacher who delivered two clinical lectures, the first to prove that no germs having the properties described existed or could exist, and the second that if they did exist they could have no effect in relation to the healing of wounds! Not many years passed before such objections were abundantly answered by the demonstration of an infinite variety of micro-organisms, and since then the study of such agents has grown into a science—the science of bacteriology—no longer limited by the narrow bounds of medical and surgical science, but affecting such widely different interests and industries as the manufacture of wines and beers, the rearing and fattening of cattle, horse tramways and racing stables, articles of food and articles of clothing, slaughter-houses and hair-factories. Much as has been accomplished in bacteriology, more remains to be done, and especially we desiderate a clearer definition of species, and a more thorough study of the influence of external conditions on the character and products of each form. If the germ theory of disease had done nothing as regards the actual treatment of disease; had not improved treatment or saved life (and we submit it has done both), its scientific value would still have been great, as leading to the marvellous discoveries of the microscope and the culture chamber in the bacteriological laboratory.

But we pass on to the discussion of more practical points. No greater changes have taken place in any department of surgery than in all that relates to the abdominal organs. The peritoneal cavity was long regarded as a veritable Pandora's box, which no one could open without being visited by innumerable plagues, difficulties, and dangers; and, when we consider the experience our predecessors had of septic peritonitis, we can see how substantial were the reasons that led them to such a conclusion. The pioneers of ovariotomy were the bold men who showed that, with reasonable precautions as to cleanliness, intraperitoneal operations were little, if at all, more dangerous than extraperitoneal ones. Surgeons, in whatever department of the art of surgery they practise, have especially to thank Thomas Keith, Spencer Wells, and Lawson Tait for demonstrating this fact. The confidence with which we now explore the abdomen for all sorts of diseases and conditions is very largely the outcome of their work. Their early results were the more remarkable, considering that the pedicle was treated by means of the clamp outside the abdominal cavity. Further, they demonstrated the possibility of successful abdominal surgery while the antiseptic theory was still in embryo, and even in their latest work owed little (if anything) to its development and practice.

Excision of the pylorus was first performed (though unsuccessfully) by Pèan, of Paris, in 1879; but it is to Bilroth and Wölfler that we are especially indebted for demonstrating how successfully it may be accomplished. Henry Morris, writing about fourteen years ago, says—"The operation has still about it so much of the nature of an experiment—perhaps even more of a mere surgical exercise, if I may be allowed the expression—that it is not possible to describe it as a thoroughly recognised surgical procedure." It cannot be said that since that time the position of the operation has materially improved. There are given us from time to time records of successful cases; but in by far the majority of cases of pyloric cancer the disease is too far advanced, the adhesions too extensive, the glandular implication too great for the operation to be anything but the "mere surgical exercise" Mr. Morris speaks of. But, not contented with removing cancer of the pyloric end of the stomach, surgeons have gone further. Schlatter, of Zurich, removed the whole of the stomach, including the cardiac and pyloric orifices, and his patient lived nearly a year and two months after the operation; and Brigham, of the United States, has been equally successful in a similar operation.

In operations for perforating ulcer of the stomach we see a more recent and decidedly more hopeful development of gastric surgery. Ulceration of the stomach is unfortunately not a rare condition, especially among domestic servants, and many lives are lost by perforation taking place, followed by septic peritonitis. Early recognition of the perforation is essential if life is to be saved; and although the anæmic and collapsed condition of the patient often leads the surgeon to hesitate as to whether he should interfere, he must remember that it is only by prompt action that a cure is possible. Unfortunately many of the ulcers are situated in the posterior aspect of the stomach, when not only is diagnosis difficult, but the perforation is hard to find and difficult to deal with. Dr. Lindsay Steven a short time back showed in this room a case where the ulcer had perforated one of the large branches of the gastric artery, with resulting fatal hæmorrhage.

Very recently it has been suggested that the perforating ulcers occurring in the course of enteric fever should be treated in the same manner as perforating gastric ulcers. That clearly is the right course to pursue; but the condition of the patient is not one where good results can be confidently expected, and so far the recoveries have been few in number.

Of operations for obstruction of the bowels I need say little. It was only a few years back that one of our prominent physicians, at a meeting of this Society, challenged our results by questioning if there had ever been in Glasgow a recovery as the result of operation in a case of acute obstruction other than hernia. I presume he would not say so now, for there have come before us in recent years numerous cases of intussusception, strangulation by bands, obstruction due to tumours, &c., where the obstruction was acute, and operation was followed by cure. Certainly such operations will always be performed in conditions little favourable for interference, and the mortality will necessarily be high; but how hopeless is the patient's chance of recovery without abdominal section the conditions found at the operations and the *post-mortem* examinations alike attest. Instead of getting less ready to operate on such cases with the growth of years, I must confess myself more and more convinced as to the urgent need of early interference in cases of acute intestinal obstruction.

As regards intussusception, I may remark that in the early stages of that condition I hold that too little thought is usually given to the possibility of reduction by manipulation under chloroform. To be effectual it must be done early—certainly before the abdomen is much distended. In children who are well under the influence of an anæsthetic the colon can be readily distinguished, and if movements are made in the reverse manner to those practised in massage of the colon, the intussuscepted bowel can be carried back to the cæcum, and can be completely reduced. The manipulation is one of some delicacy, and requires patience; but (if done early) involves little risk, certainly less than inflation or large injections. In a recent case, where the intussusception was in the transverse colon, I, unfortunately, gave up the attempt too soon, and sent the patient into hospital for operation. On making an incision over the tumour I found the intussusception almost reduced, and was able quite easily to draw out the remainder of the invagination. The operation was a simple and short one, yet the patient never rallied from it, dying about three hours after. At the *post-mortem* examination the bowel was found to have been completely reduced, and not to have been in any way injured.

Of appendicitis much might be said. It has been a fashionable craze, a mine of wealth to enterprising surgeons, an explanation of all sorts of mental, moral, and physical peculiarities; the source of an inexhaustible fund of anecdotes, of bushels of professional "chaff." We have all heard of the man who put a proviso in his will that no *post-mortem* should be performed, because his appendix had been removed *three times;* surely a sufficient reason for a *post-mortem* to be made, to see if it was still there. We have also heard of the man who had the words, "I have been operated on for appendicitis" stamped in indelible ink on the tail of his shirts, knowing that he might at some time or other be taken ill, run into hospital, and operated on for appendicitis before he knew where he was; but he was an American! A story more to the point relates to a patient of my own. He had been some time in my wards suffering from appendicitis; several consultations had taken place as to whether I should operate, and at these consultations there had been much divergence of opinion. I did not operate, and in due course he was dismissed well. Being met some time afterwards by one of my assistants, the latter said to him:—"Well, Pat, and what did you tell them at home about your illness?" to which the Irishman promptly replied—"Shure, sir, I said that the doctors providintially disagreed about my case, and so my life was spared!" Well, there certainly has been a great deal too much operating in appendix cases; that I think cannot be denied. But, on the other hand, when we consider that no more grave and dangerous condition exists than an appendix abscess which has burst into the peritoneal cavity and caused septic peritonitis, we must admit that something may be ventured to avert such a calamity. It has been the fate of most operators to cut down on the appendix and remove it, only to discover little or no disease, and yet again to leave a case untouched only to have reason to repent it when the conditions at the *post-mortem* were revealed. Hence it is impossible to lay down general rules; each case must be considered on its merits. The scoffer says that if all cases of appendicitis were left untouched by the surgeon, the mortality over all would be less than it is to-day, but even if this were true (which I cannot believe), the leave-alone policy would be unfair to those whom operation now saves. In the careful discrimination of symptoms and the due selection of cases lies safety, and already I think our "knowledge grows from more to more," and our position in regard to operation becomes more definite.

In the department of bladder surgery, the most noteworthy feature is the return to suprapubic method of cystotomy, and the almost complete abandonment of the perineal route to the bladder. That by the former a more complete exploration of the bladder can be effected is unquestionable, the working area also is wider and more free. While it is possible in most cases to get free exposure without incising the peritoneum, the fact that this structure is no longer the bugbear it was to our predecessors, justifies our trenching on the peritoneal cavity if the circumstances of the case require. Electrical exploration of the bladder is of less use than we at one time thought it would be, but under certain conditions we can ascertain the presence, location, and size of tumours, calculi, &c., and hence are able to plan our operations before commencing, knowing what we have to deal with. In regard to vesical tumours, removal *per urethram* with the lithotrite (or in the female with the finger, knife, or scissors) is much less likely to be complete and effective than by suprapubic incision, and the latter operation gives, therefore, a more complete security against recurrence. The only drawback in the suprapubic operation is imperfect drainage of the bladder afterwards. In the female this is overcome by a very large tube in the urethra —larger certainly than a No. 20 bougie—and in the male by a perineal opening large enough to admit such a tube. Even for drainage purposes the suprapubic route may be used. At first sight it seems paradoxical to draw off fluid from the top instead of from the bottom of a cavity; but, in truth, when air is excluded the drainage is as perfect by the one method as by the other, with the additional advantage, in the case of suprapubic over perineal drainage, that the wound can be kept aseptic. For cystitis, especially the tubercular form, for hæmorrhage due to cancer, and even for prostatic enlargement, suprapubic drainage acts excellently, and the simplicity of the means by which it may be effected, as demonstrated by Dr. Rutherfurd last winter, puts it within the reach of all practitioners. One can scarcely realise that twenty-five years ago we were still practising the dirty, ineffective, and dangerous method of puncturing the bladder through the rectum.

For prostatic enlargement, the operations of castration, vasectomy, and prostatectomy, have been introduced and practised with only moderate success. The problems associated with this condition appear likely to be handed down for the surgeons of the twentieth century to solve.

Among the numerous subjects to which I might allude, did time permit, I may mention operations on the brain for tumours, epilepsy, cerebral abscess, paralysis, and other conditions. A quarter of a century ago the cranial cavity and its contents were looked on as being as dangerous to interfere with as the peritoneal cavity. On one occasion, during my term as house surgeon in the Royal Infirmary, Lister was asked to see, in the wards under my charge, a case of depressed fracture of the skull, due to the fall of a slate from a roof. There was intracranial suppuration, and the question raised was, should trephining be done. "Yes," said Lister to my "chief," after weighty consideration, "you must trephine, but the man will die," and this was much the position of surgeons generally with regard to the use of the trephine. Now, we not only trephine without apprehension, but we even turn down large osteo-plastic flaps, explore the brain, return the flaps into place, and the patients seem little, if at all, damaged by the operation. But we are only at the commencement of operations on the brain. Deeper knowledge of localisation, and a more exact diagnosis of diseased conditions, will in the future lead to much wider and bolder operations than those hitherto practised. The wide field of insanity has barely been prospected by the operating surgeon.

Great hopes have been entertained as to the possibility of attacking certain diseases by the use of antitoxins, or what is commonly known as "sero-pathy" or serum treatment. The popular excitement some few years back on the announcement of Koch's discovery of the tuberculin antitoxin did an infinite amount of harm, for it raised to a high pitch the hopes both of the general public and of the profession, only to result in disappointment and despair. The whole thing was rushed so much that Koch's first tuberculin never had a chance of being thoroughly investigated, and its real merits or demerits discovered. I fear that the resulting disappointment has had its effect on all serum treatment, and that, beginning by being unduly credulous, we have finished by being unduly sceptical. However that may be, it must be acknowledged that the hopes at one time held as to the cures to be effected by serum treatment have not hitherto been justified, excepting in the case of one disease, namely, diphtheria. In that disease results which can only be called truly wonderful have been obtained, and even the explanation that the disease is much milder in type than it was some years ago does not seriously damage the credit of the treatment. In tetanus, however, the use of the antitoxin has been thoroughly disappointing. Our teachers of by-gone days told us that the cases of tetanus might be arranged in three groups—the ultra-acute cases where no treatment whatever had any effeet, and which all died; the chronic cases, which all recovered; and the subacute cases, about which it was at all times impossible to say whether they would recover or die. In the first group the tetanus antitoxin has notably failed, possibly because the symptoms develop so rapidly that there is not time for it to act. In some of the subacute cases it has apparently done good, but these are just the cases where all other remedies have had a certain measure of success; those, in fact, in which it is most difficult to be quite sure that the recovery has been brought about by the treatment. MM. Roux and Borrel have suggested the intracerebral injection of the tetanus antitoxine, on the ground that the tetanus toxine chiefly affects the nerve cells of the brain and spinal cord, and arguing that the antitoxine should therefore be applied directly to them. "If the toxine of tetanus is fixed in the central nerve cells," they argue "the patient cannot be cured by antitoxine administered hypodermically, as the central nerve cells do not take up the antitoxine from the blood, or at all events are not influenced by it; but if the antitoxine is directly injected into the cerebral substance, the progress of the disease is arrested." The cases treated in this way have been few in number, and have not been very successful. Dr. Gibb, of Paisley, a member of this Society, published a case in which he had adopted this mode of treatment with what he thought was substantial success; but, unfortunately, cerebral abscess developed later at the site of one of the punctures, and his patient died. Of the antistreptococcus serum I have no more favourable impression, whether it be used as a cure for sarcoma and carcinoma or as a prophylactic against septic infection. A patient was seen by me some months ago with a very obvious periosteal sarcoma of the shaft of the femur; I advised immediate amputation at the hip-joint, but pending arrangements being made for his admission to the infirmary, agreed that his doctor might try a series of injections of antistreptococcus serum (not the mixed toxines of Coley). We thought that even if no effect was produced on the sarcoma, the injections might serve a purpose in preventing septic mischief when the amputation was performed. The injections did not diminish the size of the tumour, or indeed produce any effect, beyond a slight temperature rise. The amputation was carried out about a week after the injections ceased; the patient stood the operation well, and all went on excellently for the first ten days, when his temperature began to rise, and he displayed symptoms suggestive of septic infection. These symptoms became gradually more pronounced, and he died nearly three weeks after the amputation. At the *post-mortem* examination small abscesses were found in the lungs and kidneys, and one small abscess in the tissues of the stump, beside the cut psoas and iliacus; the stump generally was well healed and sound. Now it is plain that the preliminary injections of antistreptococcus serum did not in this case prevent septic infection; indeed, I have a suspicion that those very injections had much to do with the occurrence of pyæmia and with the fatal issue.

In regard to simple stricture of the œsophagus, much the same change of opinion has taken place as with reference to stricture of the urethra, and it is well understood now that the cause of failure in many cases is the stopping short of sufficient dilatation. Many of the text-books still tell us that the cure of simple stricture is never permanent, and that the patient will require to be taught to pass instruments himself, and will require to use them all his life. I have a patient who had so tight a stricture that I at first was obliged to use considerable force to get the smallest bougie through. I, however, persevered using metal bullet bougies, and passing them twice weekly for many months. The treatment extended over about two years, but the cure is now so perfect that between two dates nine months apart, when I tested the œsophagus, not the slightest contraction had apparently taken place. The dilatation was carried on till a bougie fully twice the size of the largest in the sets of gum-elastic bougies could be introduced with ease, and this is, I think, the secret of my success. Symond's tubes have been used as a means of keeping a permanent canal both in simple and malignant stricture, and Abbe's string saw is an ingenious means of dividing the stricture where it is so tight that no instrument can be passed. I have not tried it, but may mention how it is used. A small split shot is clamped on to a piece of silk, and this is swallowed by the patient and finds its way into the stomach. When this is judged to have taken place the stomach is opened, and the shot sought for and pulled out of the wound. A piece of strong whipcord is now attached to the end of the silk hanging from the mouth, and pulled through the stricture and out at the stomach. By a to and fro sawing movement the whipcord is made to divide the stricture, and a Symond's tube is inserted, the opening in the stomach and abdominal wall being then closed.

The surgery of the lungs and heart is somewhat limited. In the case of the former it consists in operations for empyema, the removal of portions of gangrenous lung, and the opening and washing out of cavities; and perhaps little more will be possible to the most speculative of our successors. The cases of surgical interference with the heart are increasing in number, and are all keenly interesting. Here is one of the latest:—"A man who had been stabbed in the left side was admitted into hospital under the care of Dr. Parrozzani, of Rome, in a collapsed condition, with scarcely perceptible pulse. An operation was performed at once. A flap comprising the whole thickness of the thoracic wall, and including portions of the fifth, sixth, seventh, and eighth ribs was turned inwards. The left pleural cavity was opened and found to be full of blood, and an opening an inch in length was seen in the pericardium. This was enlarged, and a stab in the left ventricle was found to have perforated the wall and entered the cavity. A finger could be passed through into the cavity of the ventricle. The wound was closed with four sutures, then the pericardial wound was closed, and finally the external incision. The patient recovered completely."

You will observe that I have not entitled my paper the "*progress of surgery*," but the "*changes which have taken place;*" for who shall define what *progress* is? So many of our new discoveries are but the resurrection of old ideas, and and at the end of a cycle of years we find ourselves back at the point at which we set out. Although Sir Roger de Coverley never changed the cut of his coat, he yet found himself in the height of fashion three times in his life, and perhaps on such occasions regarded himself as in the van of progress.

But I am sanguine enough to believe that much of the work which has been done in the department of surgery in the last twenty-five years will not require to be undone, for our science and practice have been freed from the dominion of old theory and fusty prejudices—from the humorist pathology and the doctrine of phlogiston—and from that reverence of authority which, if pushed too far, leads to stagnation or decay.

A thoughtful student once said to me that he could learn surgery better than medicine, because, said he, "Surgery is just commonsense!" Yes, it is commonsense—based on knowledge and regulated by experience. It is therefore subject to change with changing circumstances, and to advance with more and more power as, in the "procession of the ages," the horizon widens.

CLINICAL GYNÆCOLOGY.

By J. K. KELLY, M.D.,

Physician for Diseases of Women, Glasgow Royal Infirmary;
Lecturer on Gynæcology, St. Mungo's College.

(*Continued from* p. 255.)

Two Cases of Elongatio Colli of Different Causation and Requiring Different Treatment.

Case VI.—*Hypertrophy of supravaginal cervix—Amputation.*

E. C. æt. 27, nullipara, admitted 22nd August, 1899.

Report on admission.—Patient was always quite healthy till seven years ago, when she fell off steps on which she was standing. A chair was in the way, and the back of it got between her legs, causing the injury. She fainted at the time and went to bed for the day. About a week later she noticed the womb down slightly, and the prolapse has increased gradually till it is now complete. Two years ago patient noticed her legs swollen, and attended a doctor. He gave her a lotion to rub into the legs, and ordered her to stay in bed, which she did for eight weeks, when the swelling disappeared. It remained away till two months ago, when it returned, but was not so severe, so that she was not confined to bed. Patient says she feels well except for the prolapse, and is usually quite able to take her food. When the prolapsed part is large, there is pain on defæcation. Menstruation is usually regular, but sometimes comes at fortnightly intervals. She has sometimes pain in the hypogastrium on micturition.

Patient is healthy-looking and not anæmic. Heart sounds rather feeble. Respiratory murmur normal. Abdomen normal in appearance. No pain on palpation. Cervix protrudes 2 or 3 inches beyond vulva. Portio vaginalis is small, and vaginal reflexions loose and wrinkled. Sound passes 5 inches, fundus lying in hollow of sacrum. Body of uterus seems of normal size. Very little pain on examination. Nothing detected in appendages.

On 4th September the cervix was stripped of mucous membrane anteriorly and posteriorly for about 2 inches, and amputated at that level. The vaginal and intracervical mucous membranes were united by sutures. Packing of iodoform gauze was changed on 7th and removed on 9th September. On 13th September a small ring pessary was introduced, and patient allowed to move about. She went home on 16th September.

Case VII.—*Elongatio colli—Intraligamentary ovarian cyst—Hæmatosalpinx duplex—Abdominal section.*

C. O., æt. 22, nullipara, admitted 22nd August, 1899.

Report on admission.—Patient complains of profuse leucorrhœal discharge with "falling down of the womb." This condition has been present during the last two months, and accompanied by sharp pain in the lower part of the abdomen. Micturition is difficult, the flow being established after straining; sometimes during the act the flow suddenly stops and begins again. Menstruation has been very irregular since puberty, sometimes occurring after four months' or even longer amenorrhœa. The discharge is very scanty; lasts two days. The last period occurred five weeks ago. Six months ago patient took a very severe pain in the vulva which kept her in bed for two days, the bowels being very costive at that time with tenesmus. No swelling in the vulva accompanied this pain. Nine months ago she was in the Ear Hospital for two months on account of deafness brought on in childhood by disease of the bone. When menstruation first began at the age of 15, she thinks it came on at the normal monthly intervals, but of late four, six, and even eight months have intervened. She says that the difficulty in micturition has been present for the last two years, long before she felt the womb coming down.

Patient is well developed and fairly well coloured. Expression is dull and rather indicating mental defect. A small cicatrix, as of an old sinus, is seen behind the right ear. Right tympanic membrane absent. Heart and lungs normal. Abdomen presents tenderness on pressure all over hypogastric and left iliac regions, where there is some fulness. *Per vaginam*, cervix protrudes from vulva like a penis. Os patent. Sound passes 5¼ inches, knob passing towards right sacro-iliac synchondrosis. On introducing finger behind the protruding cervix it comes upon a firm cystic mass with slightly irregular corded surface filling the posterior and left lateral part of pelvis. Patient complains of a good deal of pain on pressure over this, and very little movement can be communicated to it. The uterus lies along its right side.

On 1st September abdominal section. Intraligamentary ovarian cyst of left side removed with left tube, inner end of which was distended to size of a large cherry with old blood-clot. Right tube presented a small clot of the same kind in the same position. Ovary also slightly cystic and removed. Fundus uteri sutured by two silkworm sutures to anterior abdominal wall.

Patient left hospital on 19th September and returned on 11th October to have the uterine sutures removed. The cervix was found high up in vagina, and nearly of normal length, the diminution in the six weeks since operation being very remarkable.

The presence of these two patients in the ward at the same time made the differences between them especially striking, but the explanation of these differences is not easy.

In Case VI there had probably been some lesion to the uterine supports at the time of the accident seven years before.

This lesion I take to have been mainly a laceration of the folds of Douglas. This permitted the cervix to pass forward along the vagina and to protrude at the vulva almost immediately. This passage forwards of the cervix would necessarily involve a retroversion—a passage of the fundus into the hollow of the sacrum. In the course of years there was no farther descent of the fundus, but the constant pull of the cervix elongated the supravaginal portion—the portion between the vaginal reflexion and the peritoneal reflexion.

In Case VII the course of events is not by any means so clear. It seemed to me chiefly the portio vaginalis that was elongated, and the uterus itself, while displaced by the tumour, was not prolapsed. It is hardly conceivable that the presence of the tumour could have influenced the growth of the cervix. Is it possible that we had here a congenital elongation brought into evidence by the fact that the uterus could not rise above the pelvic brim because of its adhesions to the cyst? Yet, if it were congenital, why did it disappear so rapidly after the uterus was brought forward and fixed in anteflexion?

The small collections of blood in the tubes were also a curious phenomenon. Were they evidence of a tubal, in absence of a uterine, menstruation?

SIX CASES OF HYSTERECTOMY IN WHICH THE LEVER-CLAMP WAS USED.

In my first cases of vaginal hysterectomy I invariably used sutures for the vaginal roof, and mass-ligatures for the broad ligaments, to control the hæmorrhage. This operation was usually very tedious and exhausting. Then I began using clamps for the broad ligaments, and by these the operation was shortened. The drawback to the use of clamps, however, was the necessity for their removal after twenty-four or forty-eight hours—a proceeding which usually caused the patient considerable pain. In a few cases lately I have used Thumim's lever-clamp, and, as these are probably the only cases in which it has been used in this country, it may be interesting to report them.

This clamp is an apparatus for applying exceedingly powerful compression to the broad ligaments—or any similar structure—so that after about three minutes' application it can be removed without hæmorrhage following. Landau's report of his experience with this instrument was so favourable, that having an opportunity of using it, through the kindness of a former house-surgeon in my wards, Dr. John Bain, who had seen it used, and brought a clamp with him from Berlin, I resolved to make a trial of it.

These six cases naturally arrange themselves into four classes. Two were operated on for prolapse, one for cancer of the cervix, two for double adnexitis, and one, by abdominal section, for myoma.

CASE VIII.—*Complete prolapsus uteri—Hysterectomy with use of Thumim's clamp.*

Mrs. Q., æt. 48, iii-para, last twelve years ago, admitted 30th July, 1899.

Report on admission.—Patient dates the onset of her present illness from the birth of her first child twenty-six years ago. The delivery was instrumental, and patient made a slow recovery. When she began to get about she found that her womb came down, the descent being accompanied by a dragging pain, felt particularly in the back. Ever since she has suffered from this complaint, and has been more or less of an invalid, being seldom able to attend fully to her household work. A year past patient says the womb began to come completely outside the vulva, and was always so when she was on her feet. On rising after sitting for a time the ulcerated surface always bled. Patient has worn many pessaries, but has never derived any permanent good from them, the instruments always falling out after being worn for some time. Patient has never had any trouble with her water except shortly before the birth of her children, when she suffered from frequency of micturition. For several years she has had a yellowish discharge, and this has been much worse since prolapse became complete. Menstruation ceased ten years ago. Of late she has lost flesh considerably.

Patient has a pinched, distressed look. Examination of heart and lungs reveals no abnormality. Urine shows a trace of albumen. Abdomen presents normal multiparous appearance, surface depressed. Vagina is completely everted. Portio vaginalis and adjacent vaginal wall over a large surface are ulcerated. The uterus is completely prolapsed, the fundus being felt outside vulva.

The ulcerated surface was carefully dressed, and, at the date of operation on 11th August, it had contracted to a very small size. Uterus was removed *per vaginam*, the lever clamp being used for the ligamenta lata between uterus and ovaries. Then anterior and posterior colporrhaphy were done to lessen vaginal lumen. There was practically no hæmorrhage.

Two days after the operation patient became very troublesome, and got out of bed several times. Gradually she became completely insane, refused food, was very noisy, and troublesome to the nurses in every way she could contrive. Her strength gradually failed, and she died on 23rd August, twelve days after operation. On *post-mortem* inspection, stump of vagina, stumps of Fallopian tubes, and ovaries were found healthy. There had been no hæmorrhage. The kidneys were contracted, and showed interstitial nephritis. There was also a slight degree of hydronephrosis.

The fatal result in this case was due mainly to the depraved physical condition of the patient, who, we learned afterwards, had for a long time led a very irregular life. So far as the clamp was concerned, the opportunity of inspection revealed that it had perfectly controlled the hæmorrhage from the broad ligaments, and the small edge of tissue which had been crushed between the blades was almost imperceptible.

CASE IX.—*Prolapsus uteri—Vaginal hysterectomy with use of Thumim's clamp.*

Mrs. M., æt. 49, viii-para, admitted 1st September, 1899.

Report on admission.—Patient was in hospital a year ago complaining of ulcerating prolapse. The cervix was amputated, and anterior and posterior colporrhaphy performed. Shortly after leaving she felt "something coming down in front," with a bearing down pain in the back. Sometimes the womb comes out completely, and then she has pain on micturition with straining before the flow is established. When the bowels are at all loose she has no control over the sphincters. Menstruation was quite regular until three months ago, when it ceased, but returned yesterday just before admission.

Patient is well-developed and healthy-looking. *Per vaginam*, anterior vaginal wall protrudes from vulva, cervix lying close to fourchette. Bearing down causes cervix also to protrude. Uterus measures 5 inches to sound. It can be raised till fundus reaches level of brim, but cannot be brought forward into normal position.

On 11th September vaginal hysterectomy was performed. Right ovary was cystic, and right appendages were accordingly removed along with the uterus. Left appendages being normal were left in pelvis. Thumim's clamp was used for the broad ligaments; on removal from the right ligament, the right uterine artery spouted and was tied; a small vessel also above this bled slightly and was caught in by a suture. The small intestine protruded from the wound, and two sutures were introduced to diminish the opening in the vaginal vault, leaving a small opening for drainage.

Patient was out of bed on 23rd September and left on the 26th, wearing a small Hodge pessary, with a view to keep vaginal walls from falling into folds.

The clamp in this instance failed to control the right uterine artery. This is probably to be explained by the fact that a year before the cervix had been amputated, and the uterine artery was lying along the very border of the tissue to be removed.

In crushing the tissue it naturally spreads out, and in this case the artery had been crushed out to the extremity of the blades, and had not been involved in the pressure. However it may be explained, it illustrates one of the risks in the use of the instrument, as the bleeding would have been serious had the broad ligament slipped back at once out of reach, as it usually does in cases where it has not been lengthened out as it is in cases of prolapse. Except for this accident, the clamp acted as perfectly in this case as in the preceding.

CASE X.—*Cancer of cervix—Vaginal hysterectomy with use of Thumim's lever-clamp.*

Mrs. C., æt. 54, x-para, last child twelve years ago, admitted 21st August, 1899.

Report on admission.—Patient states that the menopause came on about nine years ago. Five years ago she had a flooding which lasted five days. After that there was no return until last May, when the discharge came on and lasted two days. This discharge returned twice at monthly intervals, and since then has been constantly present more or less. With this there has been a profuse foul-smelling discharge, rather dark in colour. She has been getting much thinner, and has fainting fits. She has occasional darting pains through lower part of abdomen. The pain is sometimes in the epigastric region, especially after food. For the last eighteen months she has had severe itching and burning in the external genitals, varying in severity. For fifteen months she has had some incontinence of urine.

Patient is of good colour, but wrinkled. Bronchitic râles are heard throughout thorax. Heart sounds pure. Urine normal. Abdomen presents normal characters, but is slightly tender to pressure over the hypogastrium. *Per vaginam*, cervix is irregular in outline; edge of posterior lip rather hard and notched; ulceration at right side passes up to vaginal fornix, where there is tenderness on pressure. Uterus is fairly movable, measuring 2¾ inches.

Diagnosis.—Cancer of cervix, not very far advanced.

Vaginal hysterectomy was done on 28th August. There was almost no hæmorrhage; the clamp was applied between uterus and ovaries. The convalescence was unmarked by any noteworthy event, and patient went home on 9th September, much improved in appearance and strength.

Microscopic examination of cervix revealed ordinary epithelial cancer. The clinical history seemed to indicate that it was of slow growth, and the prognosis may be regarded as hopeful.

The clamp in this case was easily and efficiently applied; indeed, the whole course of the operation and the convalescence were most satisfactory.

Case XI.—*Double salpingitis—Dermoid of ovary—Total vaginal extirpation with use of lever-clamp.*

Mrs. M'E., æt. 32, iv-para, last a twin pregnancy, three years ago, admitted 21st August, 1899.

Report on admission.—Three years ago, about six weeks after the birth of twins, patient took inflammation, which came on with rigors, followed by sweats, accompanied by pain in the hypogastric and left iliac regions. She was attended by a nurse who douched her twice daily. Since that time patient has never felt quite well, the pain coming at intervals independently of menstruation; sometimes shooting down the left leg and into the vulva, at other times as if it were in the iliac crest. Menstruation has been frequent ever since, occurring every fortnight or three weeks, the discharge being more profuse than formerly. For the last year she has been getting much stouter, and has occasional attacks of vomiting. Red discharge comes on at any time if she is agitated or worried.

Five years ago she had two miscarriages, both at the fourth month, and after these she suffered from prolapse, of which she was relieved by the use of a pessary.

Patient is very pallid, but stout and well-developed. Mucous membranes also pale. Harsh respiratory murmur over whole chest. Heart sounds pure. Abdomen full, percussion clear over whole surface. Some tenderness in left iliac region, with feeling of fulness just above Poupart's ligament and behind symphysis. *Per vaginam*, uterus enlarged, in normal position, 3½ inches to sound; to right of and slightly behind cervix, small tense cystic body, not movable and not very tender to pressure. Left appendages matted posteriorly and more sensitive than the right.

Diagnosis.—Double salpingitis, with cystic adherent right ovary.

Patient began menstruating after admission, and had evidently a good deal of suffering. On 30th August, menstruation having ceased two days before, total vaginal extirpation of uterus and appendages was done. Owing to the numerous adhesions and the size of the uterus, which was very thick walled, the uterus was bisected before removal. On the right side were two cysts, each of the size of a Victoria plum. They both ruptured during removal. One of them was formed by the ovary transformed into a dermoid cyst filled with hair, curdy material, and watery fluid. The other appeared to be tubo-ovarian, and was filled with clear fluid. The left ovary formed a blood sac, with dilated tube adherent over it, and closed at the fimbriated end. The lever-clamp was applied externally to the appendages. There was a good deal of bleeding from the torn adhesions.

Recovery was satisfactory. A slight oozing of blood continued for twelve days, and a slight pain in the left side was still present when patient left hospital on 16th September.

Bisection of the uterus in vaginal hysterectomy, such as was done in this case, makes access to the appendages much easier than when the operation is carried out in the usual way. The bleeding from the divided uterus is very slight, both because no large vessels are divided, and because the arteries supplying the tissues are, to a considerable extent, compressed by the tension on the ligamenta lata produced by drawing down the uterus.

The clamp in this case did not control the hæmorrhage so completely as in the other cases, but probably the oozing, which persisted for about twelve days, arose from the torn adhesions and from the vaginal wall, and not from the broad ligaments.

CASE XII.—*Double adnexitis—Total vaginal extirpation with use of Thumim's clamp.*

Mrs. C., æt. 30, i-para, seven years ago, admitted 8th September, 1899.

Report on admission.—Seven years ago, after the birth of her child, patient took inflammation in the right iliac region; she was nearly a month in bed at that time, the red discharge lasting for two months. Since then pain in the left side has been present more or less; being worse after any exertion and just before menstruation, but is relieved by the flow. The pain is accompanied by a feeling of weakness in the loins. Menstruation has always been regular, the flow being very scanty of late, and only lasting a day. Leucorrhœa is sometimes profuse. Patient has scars on the left cheek and round the neck which are the remains of a sore she had at puberty, which seems to have been of a lupoid character. There has been no enlargement of the glands. Since March patient has been treated with vaginal tampons twice a week.

Patient is pale and exhausted looking. Vocal resonance is marked over right apex, but pulmonary sounds otherwise are normal. Heart sounds irregular, but free from murmur. Abdomen somewhat full. Walls thick. Slight tenderness in right iliac region. *Per vaginam*, uterus is in normal position, measuring 2¾ inches to sound. Mobility slightly diminished. Appendages on right side form a cystic mass closely applied to side of and behind cervix. Left appendages also form a considerable mass to left of uterus, but not of such a cystic feel as on right side.

20th September.—Under chloroform, uterus and appendages were removed *per vaginam*, Thumim's clamp being used. Great difficulty was experienced in separating the adhesions, especially on the right side, where there was a considerable and firm attachment to small intestine, which was brought down into the vagina and separated under the guidance of the eye. On this side also a quantity of pus escaped during removal. In order to reach the appendages the uterus was bisected.

Recovery was uninterrupted, and patient left hospital well on 3rd October.

CASE XIII.—*Myomatous uterus—Ovarian cystoma—Total abdominal extirpation with use of lever-clamp.*

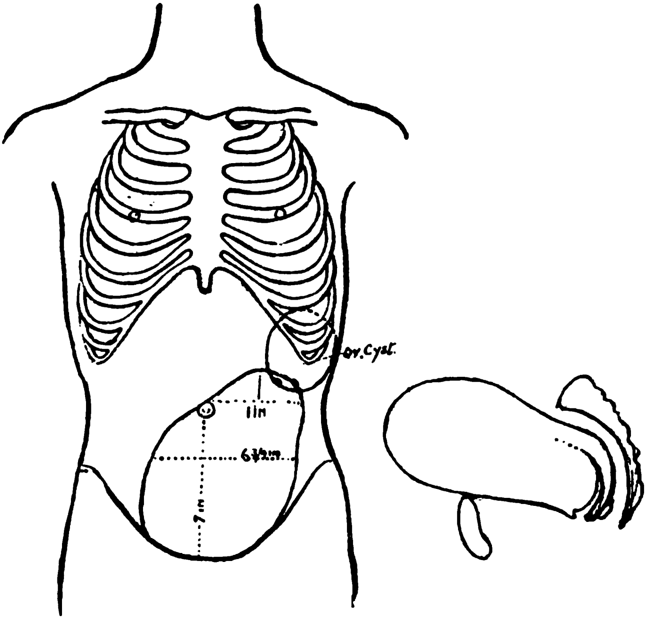
C. M'C., æt. 41, had one child twenty-four years ago, admitted 7th August, 1899.

Report on admission.—Patient states that her illness has lasted for five years. It began with a severe flooding, which followed on a period of two months' amenorrhœa. She passed several clots which caused considerable pain. Since then she has had floodings at intervals of one to three months, the quantity of blood lost varying with the length of time that intervened between the attacks. She thinks that of late the floodings have diminished both in quantity and frequency, but have, however, been so severe as to necessitate plugging of the vagina. Sometimes the onset of an attack was preceded by the formation of a swelling in the inguinal region, which, she says, diminished considerably when the flooding ceased. At other times general abdominal distension was the precursor of the onset. The blood passed was usually clotted. The floodings generally accompanied or followed menstruation; occasionally they set in just after the cessation of the period or on the last day of the menstrual flow. She thinks it is at least three years since she noticed a swelling or tumour in the abdomen. It has gradually increased in size, but more rapidly within the last few months. She complains of constant pain, varying in intensity, in the left side, and which generally prevents her from sleeping. When not accompanied by floodings, menstruation was and is quite regular, though lately the quantity has diminished, and the colour has become quite pale. Appetite is very poor, milk and sodawater being often all she is able to take.

Patient has been twice in the Western Infirmary, once with inflammation of the right lung, and once as the result of an accident in which she sprained her ankle. She has had trouble with her water since her illness set in. Occasionally it had to be drawn off, and often its passage was accompanied by pain and a burning sensation. Defæcation is accompanied by a pain in the left side, varying in intensity. During the last two months she has lost flesh rapidly.

Patient is emaciated, weak, and listless. She is very anæmic, and her face has a yellow tint, the depth of pigmentation varying from day to day. Urine shows a trace of albumen, but no tube-casts are found. Abdomen is occupied by a centrally situated tumour, with larger part of mass to left of middle line; upper border reaches 1 inch above umbilicus. It is uniform in outline and somewhat soft to the touch, but giving no cystic feeling. In the left flank a tumour can be felt, which on pressure can be made to ascend beneath the ribs, and to descend till its lower border is below the level of the iliac crest. It seems to be connected by a band of tissue to the larger tumour. This tumour also is mobile, and can be displaced laterally 1½ inch, and vertically fully an inch. *Per vaginam*, uterus and tumour form one mass. Os uteri is low in pelvis, but otherwise in normal situation. It is patent enough to admit tip of forefinger, which comes upon a firm tumour mass seemingly attached to the anterior wall of the cervix, and with the posterior and lateral walls stretched out over it, so that the posterior lip forms a thin border lying upon its surface.

Diagnosis.—Uterine myoma (along with ovarian cyst? or cystic movable kidney?).



After admission, patient continued very weak and lethargic, and was able only to take liquid nourishment. There was some uterine hæmorrhage which, though not in any considerable amount, was, in her weak condition, serious enough, and we resolved on operation, especially as the movable tumour in the left hypochondrium was most probably an ovarian cyst.

On 18th August abdominal section. Tumour in left side proved to be an ovarian cyst, and was removed separately. The myomatous uterus was then removed by Doyen's method, Thumim's clamp being used for the broad ligaments after ligature and division of the upper part containing the ovarian vessels. Very little blood was lost, and mostly from the vaginal fornices.

Next day patient was in a condition much the same as before operation, and we formed a favourable prognosis, but on the following day she began to be restless. Sickness became constant, and she died collapsed about sixty hours after operation.

On *post-mortem* examination it was found that there was no blood in the pelvis; the healing process had set in throughout the pelvic wound. The abdominal organs were excessively anæmic, and the kidneys showed parenchymatous nephritis.

The clamp had acted perfectly, and had the recuperative power of the patient been slightly greater the result of the operation would probably have been successful. It had unfortunately been delayed so long that any operation was of the nature of a forlorn hope.

With regard to the use of the clamp, the results in these six cases seem fairly satisfactory. The blood control was perfect in all but one, and the failure in this case can be explained. The clamp takes the place of both ligature and suture so far as the broad ligaments are concerned. It leaves a very small edge of necrosed tissue to be absorbed, much smaller than is left by mass-ligature of the broad ligament, less even than would be left if the cautery were used, and the cautery, so far as I remember, has not yet been tried for hæmostasis of the ligamentum latum in hysterectomy.

Its evident defects are—(1) It requires the exercise of great strength to bring the blades together, especially when the tissues to be compressed form a mass of any considerable thickness; (2) in the same condition of tissue, and when the broad ligament is lengthened out, as in many cases of myomatous uterus, a part of the tissues is apt to be squeezed out beyond the point of the blades and so escape the pressure. Both of these defects will, no doubt, be met in some way, as by lengthening the blades and by adopting another method of applying the pressure. Even with these defects, however, it seems a valuable instrument, and deserves a further trial by surgeons as well as gynæcologists.

A NOTE ON THE MINUTE-BOOK OF AN EARLY GLASGOW MEDICO-CHIRURGICAL SOCIETY.

By GEORGE S. MIDDLETON, M.A., M.D.,
Physician to the Glasgow Royal Infirmary.

IN Dr. Duncan's interesting volume, *Memorials of the Faculty of Physicians and Surgeons of Glasgow*, there is a brief account of the various Glasgow medical societies of which records have been preserved. To these there is now to be added another, the first minute-book of which lies before me. This volume was presented to the Medico-Chirurgical Society last session by Dr. C. Fred. Pollock, who had received it from the grand-daughters of the late Dr. William Lyon, a member of the Society, and probably at one time its secretary.

Although there was in existence the Glasgow Medical Society, founded in 1814, three medical men, Mr. Marshall, Dr. Ferguson, and Mr. Wilson, "considering the great advantage which each of them might derive by forming themselves into a society for the purpose of writing and discussing medical subjects," met on 13th June, 1820, and constituted themselves into a society denominated The Glasgow Medico-Chirurgical Society, which survived for at least twelve years. The last minute in the volume bears date 14th April, 1825; but, on a later page, there is a copy of the Laws of the Society, to which additions were made as late as 1830, "as per minutes, Vol. III" (Vols. II and III have not been recovered), and in a list of members who sign the Laws the latest entered in 1831, and the last resignation noted took place in 1832.

The Society does not seem ever to have had many members. At its fiftieth meeting it had only nine, and the total number who signed the Laws was only twenty-one. From this latter list we miss the names of two of the founders; but on the last page we find their absence fully accounted for, both having "absconded."

The Society met twice a month, at first in each others' houses, then for a short time in the College, and finally in Cow Pock Hall. Just as in the earlier Society, papers were compulsory, and fines were exacted for want of punctuality, for absence, &c. At the meeting of 31st August, 1821, only one member was present, and he "having waited untill his patience was nearly exhausted, it was resolved that all the absentees be fined double."

The earlier minutes simply name the papers read; but from the beginning of 1824 the minutes contain a *résumé* of the papers and of the discussions. The subjects were very various, but few of them are of special interest now. The report of a paper on cases of "Simulated Phthisis Pulmonalis" shows that empyema was not known in 1824. In the same year they had a discussion on "Phrenology," a subject then of special interest, as "Mr. Combe had consented to deliver a course of lectures" in the city; the Society, by a majority, agreed that it was "the true science of the human mind." Two cases are recorded as chorea, which would now probably be classified as instances of the *maladie des tics*, one of which was cured by inunction of tartar emetic. At the meeting on 3rd February, 1825, Mr. Davidson related the case of a boy of 13 years of age, "who, after labouring under symptoms of an inflammatory affection of the throat and chest for some days, expectorated a piece of membrane of considerable size. It was some inches in length, of a circular form, and part of it was divided into two branches, showing that it had extended into the bronchi. It was a pretty thick membrane, and possessed considerable firmness. The boy had many of the symptoms of croup, but wanted the swelling and lividity of the face generally present in that disease. The complaint proved fatal on the fifth day, forty-eight hours after the expulsion of the membrane from the windpipe." This case puzzled the members, most regarding the disease as bronchitis, one looking upon it as cynanche trachealis, while the author viewed it as *sui generis*, conceiving that it was the lining membrane of the windpipe which was thrown off.

The treatment of consumption is adverted to on various occasions, and it formed the sole subject of discussion on 17th February, 1825. Mr. Campbell read a paper advocating the tonic plan of treatment, but the majority of his hearers supported the antiphlogistic treatment. "The Society, in discussing this subject, naturally adverted to the chief promulgator of this practice, a *medico-clerical gentleman of consumptive notoriety*, who, by means of nourishing diet of the most substantial kind, with occasional use of wine and ardent spirits, aided by cold and tepid sponging, with as much exercise as the patient can bear, has effected so many wonderful cures, and rendered his name famous over the three kingdoms. If his practice has been so strikingly successful, he ought long ago to have sacrificed every feeling of personal aggrandisement to the public good, and, by publishing an account of his experience, illuminated the darkened intellect of his medical brethren, and removed those prejudices which many of the best informed entertain against it." What would they have thought of the Nordrach treatment?

We have no evidence of the existence of this Society later than 1832. Though at one time it contained on its roll the names of nearly a dozen men who were on the staff of the Royal Infirmary or engaged in teaching in some of the schools, the Society must have become defunct, probably not much later than 1832, as a good many resignations had taken place prior to that time. The Medico-Chirurgical Society now flourishing, cannot, therefore, claim this volume as its first minute-book; besides there are in existence the minutes of that Society from its institution in 1844, and its laws have all along been quite different from those above spoken of.

ON LOSS OF THE KNEE-JERKS IN GROSS LESIONS OF THE PRÆFRONTAL REGION OF THE BRAIN.

BY R. T. WILLIAMSON, M.D. LOND., M.R.C.P.,
Physician to the Ancoats Hospital, Manchester.

IN an interesting article in the September number of the *Glasgow Medical Journal,* Dr. Hawthorne discusses the variations in the condition of the knee-jerks in cerebellar tumours, and especially draws attention to the loss of the knee-jerks which is sometimes observed, and which has often been recorded.

The object of my note is to draw attention to the fact that, in tumour and abscess of another region of the brain—the *præfrontal region*—the knee-jerks are sometimes lost, just as in cerebellar tumour. In such case, there is usually nothing to account for the loss of the knee-jerks, except the lesion of the præfrontal region. The knee-jerks were lost in *three* out of *five* cases of tumour or abscess of the præfrontal region which I recorded in 1896.[1]

The first case was one of sarcoma of both præfrontal regions. I examined the knee-jerks almost every day for four weeks, but always found them absent. The tumour growths were limited to the præfrontal regions, whilst the ascending frontal convolutions, and the motor area of the cortex, the motor fibres in the white matter, and the basal ganglia were not invaded by the growth. The cerebellum, medulla, and pons were also normal. There were no symptoms of spinal cord lesion during life; but in order to be sure that no spinal pathological changes were present, I examined the spinal cord carefully. Both macroscopically and microscopically it was normal.

---

[1] R. T. Williamson, "On the Symptomatology of Gross Lesions (Tumour and Abscesses) involving the Præfrontal Region of the Brain," *Brain,* 1896, parts lxxiv and lxxv, p. 346.

The second case was one of abscess of the right præfrontal region. The knee-jerks were both absent. There were no symptoms indicating any lesion of the spinal cord, and also there was no brain lesion, except the abscess in the præfrontal region.

In the third case, the knee-jerks were absent, and *post-mortem* a tumour was found limited to the right præfrontal region. Other parts of the cerebrum and the cerebellum were normal.

In the paper referred to, I analysed the condition of the knee-jerks in 50 cases of præfrontal tumour or abscess (45 from medical literature and 5 recorded by myself). In 20 of these cases the knee-jerks were not mentioned; in the other 30 cases the condition was as follows:—Knee-jerk absent on both sides, in 6 cases; knee-jerk very feeble on both sides, in 2 cases; knee-jerks normal or increased, in 16 cases; knee-jerk very feeble on side opposite to tumour, in 4 cases; knee-jerk very feeble on side of the tumour, in two cases. The knee-jerks were both absent, therefore, in 6 out of 30 cases of tumour or abscess of præfrontal region (verified by *post-mortem* examination)—*i. e.*, in 20 per cent of the cases. In all of the cases in which the knee-jerks were absent, there was no indication of lesion of the spinal cord or peripheral nerves; but in only one of the cases (the first which I have recorded) was the absence of microscopical changes in the spinal cord shown by pathological examination. In tumour growths involving the motor region of the brain, the knee-jerk on the side opposite to the lesion is generally increased, and on the side of the lesion normal or increased. In 30 cases of tumour of the motor area of the brain (taken for comparison with the 30 cases of gross lesion of the præfrontal region analysed above) the knee-jerks were both present in all except one, and in this case the growth was very extensive, and had invaded the basal ganglia.

In a case of tumour of the second left frontal convolution, recently recorded by Dr. Gordinier,[1] it is stated that "the most careful reinforcement failed to elicit the presence of patellar tendon reflexes." Yet at this time there was no other affection of the legs. The autopsy revealed nothing to account for the loss of the knee-jerks except the præfrontal tumour.

Apparently in tumour or abscess, in two regions of the brain especially—the *cerebellum* and the *præfrontal* region—the knee-jerks are sometimes both absent; whilst in tumour or abscess in other parts of the brain, loss of the knee-jerks is exceedingly rare.

CURRENT TOPICS.

Royal Infirmary.—The following appointments have been made for the winter six months:—

House-Physicians—John D. Young, M.B., Ch.B., assistant to Dr. Dougall; E. C. Robertson Fullarton, M.B., C.M., assistant to Dr. McVail; Lewis MacLachlan, M.B., C.M., assistant to Dr. Middleton; H. C. Ferguson, M.B., Ch.B., assistant to Dr. Lindsay Steven; A. J. Ballantyne, M.B., Ch.B., assistant to Dr. Monro.

House-Surgeons—John G. Parker, L.R.C.P.E., &c., assistant to Mr. Clark; James M. Invererity, L.R.C.P.E., &c., assistant to Dr. Barlow; A. Garrow, M.B., Ch.B., assistant to Dr. Adams; J. S. Ormond, M.B., Ch.B., assistant to Dr. Newman; Duncan M'Gregor, L.R.C.P.E., &c., assistant to Dr. Knox; Andrew Love, M.B., Ch.B., assistant to Dr. M'Lennan; Thomas Kirkwood, M.B., C.M., assistant to Mr. Pringle.

Ophthalmic Department—A. B. Sloan, M.B., Ch.B., assistant to Dr. Ramsay.

Gynæcological Department—Miss E. M. S. Walker, M.B., Ch.B., assistant to Dr. Kelly.

Western Infirmary.—The following appointments have been made for the ensuing six months:—

House-Physicians—Alexander Laurie Watson, M.B., Ch.B.; Arthur Robin, M.B., Ch.B.; Robert Fullarton, M.A., M.B., Ch.B.; Ronald D. Campbell, M.B., Ch.B.

---

[1] H. C. Gordinier, "A Case of Brain Tumour at the Base of the Second Left Frontal Convolution," *American Journal of Medical Sciences*, 1899, No. 5.

House-Surgeons—John Aitken, M.B., Ch.B.; Hyam Goodman, M.A., M.B., Ch.B.; Alexander Simpson Wells, M.B., Ch.B.; George Coats, M.B., Ch.B.; William John Orr, M.B., C.M.; J. Garden Green, M.B., Ch.B.; William H. Steel, M.B., Ch.B.

VICTORIA INFIRMARY.—Dr. John Anderson has been appointed Pathologist to the Institution.

POST-GRADUATE INSTRUCTION IN BACTERIOLOGY.—Medical gentlemen are informed that excellent opportunities exist at the Royal Infirmary for the study of this subject. The course is conducted by Dr. M'Crorie, Bacteriologist to the Institution, and, by arrangement with him, may be begun at any time. The fee is two guineas.

THE GLASGOW SOUTHERN MEDICAL SOCIETY.—The opening meeting of the Glasgow Southern Medical Society for the Session 1899-1900, was held on Thursday evening, 5th October, in the rooms of the Southern Medical Club, 18 South Portland Street. Dr. R. H. Parry occupied the chair, and there was a good attendance of members.

Dr. Chas. E. Robertson, the representative of the Society to the Victoria Infirmary, gave an interesting account of the work done during the year, dwelling particularly on the improvements carried out at the Bellahouston Dispensary. At the conclusion of his address, the Treasurer, Dr. William M'Millan, presented his financial statement for the year, which showed a surplus of £25.

The meeting then proceeded to the election of officials in room of those retiring, and as now constituted the office-bearers are as follows:—*Hon. President,* William Macewen, M.D., LL.D., F.R.S.; *President,* Hugh Kelly, M.D.; *Vice-Presidents,* Thomas W. Jenkins, M.D., and William Watson, M.D.; *Treasurer,* William M'Millan, M.B., C.M.; *Secretary,* John Fraser Orr, M.D.; *Editorial Secretary,* Andrew Wauchope, M.B., C.M.; *Seal Keeper,* John Stewart, M.D.; *Extra Members of Council,* Robert Pollok, M.B., C.M., Alexander C. M'Arthur, M.B., C.M., Duncan M'Gilvray, M.B., C.M.; *Court Medical,* Robert H. Parry, L.R.C.S. Edin., John Dougall, M.D., Robert W. Forrest, M.D., Archibald Brown, M.D., Edward M'Millan, L.R.C.S. Edin.; *Representative to Victoria Infirmary,* Chas. E. Robertson, M.D.

The annual dinner was held on Thursday evening, 19th October, in the St. Enoch Station Hotel, the President of the Society, Dr. Hugh Kelly, presiding.

There were forty-seven gentlemen present, and Professor

William Macewen, F.R.S., Hon. President of the Society, was the guest of the evening. Dr. Thomas W. Jenkins and Dr. William Watson acted as croupiers, and among others present were Sir William T. Gairdner, Professor M'Call Anderson, and Professor Glaister.

After the loyal and patriotic toasts had been duly honoured, Dr. Sloan proposed the toast of "The Honorary President," and in doing so referred to the distinguished career of Dr. Macewen, and to his acute powers of observation. There were warriors, he continued, to be found in the battlefield, but in the peaceful arena of civil life heroes were also to be found, and Dr. Macewen was one of them.

In replying to the toast, Dr. Macewen thanked the Society for electing him to the position of Hon. President, a position which was the most honourable the Society could bestow, and which was quite unexpected on his part. He referred to the long connection he had had with the Society, which in its management gave an example to others in Glasgow.

Among other speakers were Sir William T. Gairdner, Professor Glaister, Mr. H. E. Clark, and Dr. Barr. An orchestra rendered selections of music during the evening, and an enjoyable night came to a successful close with the singing of "Auld Lang Syne."

UNIVERSITY OF GLASGOW.—At the recent professional examinations for the degrees of M.B., Ch.B., the following candidates passed with distinction in the subjects indicated:—

First Examination.—In Botany: Henry Græme Anderson, John Baird Morton, William Templeton. *In Zoology:* James Glover, Anna Pollock Martin, Berkeley Hope Robertson. *In Physics:* Carl Hamilton Browning, John Muir Kelly, David Robertson Mitchell, John Murdoch, Robert Tait Wells, M.A. *In Chemistry:* Isabel Deane Mitchell.

Second Examination.—In Materia Medica and Therapeutics: Robert Wellwood Auld, Samuel James Cameron, James Bertie Wylie Cook, William Dick, James Grant Millar, John Paton, John Walker Renton, Elizabeth Ness MacBean Ross, Donald Steel, Joseph Goodwin Tomkinson, John Unsworth.

Third Examination.—In Medical Jurisprudence and Public Health: Lizzie Thomson Fraser, James Dunlop Lickley, William Barr Inglis Pollock, Alexander Dey Thompson.

The following have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):—

Robert Adam (B., P.)
Scott Campbell Adam (B., P.)
Archibald Craig Amy (P.)
Henry Graeme Anderson (B., P.)
John William Arthur (B., Z., P., C.)
John Bain (Z., P.)
Thomas Bennett (Z., C.)
Archibald Grainger Bisset (Z., P.)
David Blackley (B.)
Alexander Blair (B., Z., P., C.)
William Thomas Bolton (B., P.)
Robert George Bradford (B., C.)
Thomas Brodie (P.)
Carl Hamilton Browning (B., P.)
Robert Harold Campbell (C.)
Thomas Murdoch Campbell, M.A. (B., C.)
Alexander Erskine Clark (B., Z., C.)
Andrew Connal (B.)
Thomas Goodall Copestake (C.)
William Smith Craig (B., P.)
John Cross (C.)
Weir Burns Cunningham (B., P.)
David Dickie (B.)
Thomas Thornton Macklin Dishington (B., P.)
David Garfield Dykes (B., P.)
James Eadie (B., P.)
Cunison Chas. Finlator (B., P.)
James Forsyth (B., Z., P., C.)
William White George (P., C.)
William Gilchrist (Z.)
William Macmillan Gilmour (C.)
James Glover (B., Z.)
George Munn Gray (B., P.)
Louis Leisler Greig (B., P.)
John Hanson, M.A. (B., P.)
John Cochrane Henderson (B.)
Lawrence Hislop (Z.)
Malcolm Hutton, M.A. (B., Z.)
Arthur Innes (B., P.)
Alexander Jamieson (Z.)
John Muir Kelly (B., P.)
Alexander Leggat (B.)
Robert Thomson Leiper (B., P.)
Archibald Leitch (Z., C.)
James Marshall (B., P.)
Gavin Millar (B., P.)
Peter Millar (B., P.)
David Robertson Mitchell (B., P.)
John Baird Morton (B., P.)
Gavin Muir (B., P., C.)
John Muir (B., P.)
John Murdoch (B., P.)
John Bertram M'Cabe (P.)
Donald Carmichael M'Cormick (B., P.)
John Finlay Macdonald (P.)
Neil M'Dougall (B., P.)
James Boston M'Ewan (B., P.)
Hugh Allan Macewen (B., P.)
James Denniston Macfie (B.)
Robert Clark M'Guire (B., P.)
James M'Houl (B., P.)
Alexander Stewart M'Millan (C.)
James Anthony Macvea (B.)
James Carmichael Pairman, M.A. (B., Z.)
William Robinson Pirie (Z., C.)
James Porter (B., P.)
George Raeburn (B., P.)
Berkeley Hope Robertson (B., Z.)
Robert Thin Craig Robertson (C.)
Campbell Ross (B., P., C.)
William Garrow Shand (B., P.)
John Macgregor Smith (B.)
James Alexander Somerville (C.)
John Black Stevenson (B., P.)
Norman Burgess Stewart (B., P.)
William Stewart (C.)
John Wilson Sutherland (B., P.)
Murray Ross Taylor (B., P.)
William Templeton (B., P.)
George Douglas Turner (Z., C.)
Joseph Walker, M.A. (B., C.)
William Lind Walker (B., Z.)
George Wallace (P.)
Robert Watson (B., C.)
William Norman West Watson (C.)
Robert Tait Wells, M.A. (P.)
George Wilson (Z., P.)

Robert M'Nair Wilson (B., Z.)
Eldred Wright (B., P.)
James Wyper (B., P.)
Hugh Young (B., C.)
John Young, Glasgow (B., Z.)
John Young, Mt. Vernon (B., P.)

WOMEN.

Helen Stephen Baird, B.A. (P., C.)
Agnes Wallace Cameron (B.)
Mary Charlotte Cameron (B., Z., P.)
Jane Campbell (B.)
Ethel Lily Chapman (P., C.)
Jessie Galloway Duncan (B., Z.)
Mary Theresa Gallagher (B., Z.)
Jane Reid Foulds Gilmour (B., Z., P.)
Katherine Robina Margaret Lucas (Z., C.)
Margaret Hardy (B.)
Anna Pollock Martin (B., Z.)
Margaret Walker Millar (B., Z.)
Eliza Jane Millar (B., Z.)
Isabel Deane Mitchell (B., Z., C.)
Jessie Emily Munro (B., Z.)
Alice Wesley Maclean (Z., P.)
Charlotte Reid Park (B., Z.)
Jessie Marie Stewart (B., Z., C.)
Elizabeth Taylor Talbert (P.)
Janet Gardner Waddell (C.)

The following have passed the second professional examination for the degree of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):—

John Anderson (M.)
Thomas Anderson (M.)
William Archibald (A., M.)
Robert Wellwood Auld (M.)
John Stoddart Barr (M.)
Andrew Baxter (M.)
Ernest C. Burnett (A., M.)
Patrick Thomas Cairns (P.)
Samuel James Cameron (M.)
John J. Y. Campbell (P.)
Robert David Campbell (M.)
Edward S. Chapman (P., M.)
George H. Clark (A., M.)
James B. W. Cook (M.)
Ernest H. Cramb (P., M.)
Andrew Currie (M.)
John S. Dale (A., P., M.)
David B. Davidson (M.)
Gregor H. G. Davie (A., M.)
William Dick (M.)
Alexander Doig (M.)
Hugh M'M. Donaldson (M.)
George H. Downie (M.)
Reginald N. Dunlop (M.)
William Elder (P.)
William Watt Farrer (M.)
George Ferguson (M.)
Duncan J. Fletcher (P.)
William Gemmill (M.)
Archibald Gow (M.)
Andrew P. Granger (P.)
John Gregor (M.)
Leslie C. B. Head (M.)
Francis J. Henry (M.)
Matthew Hunter (M.)
William J. Isbister (M.)
Pierce Jones (A.)
Daniel R. Kilpatrick (M.)
William H. Kirk (M.)
David Kyle, M.A. (A., P., M.)
John Lambie (A., P.)
Alexander Linn (A., M.)
Joseph P. Lusk (A., P.)
William A. Masson (M.)
James G. Millar (P., M.)
Robert J. Mills (A., P., M.)
Allan D. Mitchell (A., M.)
Samuel J. Moore (A., P., M.)

John Morison (A., P.)
Alan Howie Muir (M.)
Coll M‘Donald (M.)
William F. M‘Glashan (M.)
Alexander M‘Lean (A., P., M.)
Hugh A M‘Lean (M.)
A. M‘G. M‘Millan (A., P., M.)
G. W. M‘Millan (A., M.)
Robert Orr (M.)
John Paton (M.)
James N. Prentice (M.)
Robert Ramsey (M.)
Thomas H. Rankin (A., P.)
Andrew Reid (A., M.)
John W. Renton (P., M.)
Thomas Richmond (M.)
William Robertson (Kilmarnock) (M.)
Thomas R. Rodger (M.)
William G. Rodger (M.)
Norman C. Rogers (M.)
Andrew T. Ross (P., M.)
James C. Ross (A., P., M.)
Malcolm B. G. Sinnette (P., M.)
David Spence (A.)
Donald Steel (M.)
John Stewart, M.A. (A., M.)
John B. Stewart (M.)
Robert R. Swan (M.)
James N. Todd (M.)
J. G. Tomkinson (M.)
John Turnbull (P.)
J. W. Turner (A., P., M.)
John Unsworth (P., M.)
R. W. Valentine (A., P., M.)
James Walker (A., P., M.)
George S. Wallace (M.)
Hugh F. Warwick (M.)
R. G. White, M.A. (M.)
Archibald S. Wilson (P.)
David A. Wilson (P., M.)
James Wilson (P.)
John Wilson (A., P.)
Robert Wylie (M.)

WOMEN.

Margaret Edith Bryson (A.)
Janet B. Higgins (A., P., M.)
Janet Thomson Miller (A., P.)
Alice Moorhouse (M.)
Elizabeth Ness MacBean Ross (A., P., M.)
Agnes B. Sinclair (A.)
Agnes Bankier Sloan (A.)
Elizabeth M. Sloan (A.)
Henrietta Fraser Young (M.)

The following have passed the third professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):—

Matthew Aikman, M.A. (M.)
Thomas Thomson Bathgate (M.)
Alexander Binning (M.)
Alexander Birch (P., M.)
William Herbert Brown (M.)
John Douglas Brownlie (M.)
Edward Provan Cathcart (M.)
Robert Clark (M.)
Frank Lindsay Dickson (P., M.)
John Downie (M.)
John Pinkerton Duncan, B.Sc. (P., M.)
Leonard Findlay (M.)
John Forrest (P., M.)
Alexander Fraser, M.A. (M.)
David George Somerville Gartshore (P., M.)
William Girvan (P., M.)
Charles Aikman Gourlay, M.A. (M.)
James Dickson Gourlay (P., M.)
John Gracie (P., M.)
Charles Herbert Gunson (M.)
Charles Milburn Hope (P.)

Thomas Hamilton Jack (P., M.)
William Bryce Kerr (P., M.)
Alexander King (P., M.)
James Dickson Laidlaw (P., M.)
John Francis Lambie (P.)
Alexander Leitch (P., M.)
James Dunlop Lickley (M.)
Donald M'Farlane Livingston (M.)
Alexander Logan (M.)
David Longwill (P., M.)
Jacob Mains (M.)
Andrew Mair (M.)
Allan Martin, M.A., B.Sc. (M.)
Robert M'Nab Marshall (M.)
William Archibald Mills (P., M.)
Alexander Robert Moir (P.)
Daniel Morrison (P.)
Alexander Munro (M.)
Alexander MacCulloch (P., M.)
James Wm. M'Dougall (P.)
Walter James M'Feat (P.)
George Steventon M'Kinnon (M.)
James M'Kinnon (M.)
William Barr Inglis Pollock (M.)
David Russell (M.)
David Shannon (P., M.)
Andrew Stewart (P., M.)
Robert Bryers Thom (P., M.)
Alexander Dey Thompson (P., M.)
Joseph Swinburn Townley (P., M.)
James Cameron Turnbull (M.)
Albert Ernest Wainwright (P.)
William Dinning Walker (P., M.)
George White (M.)
Hugh Patrick Wright (M.)
John Young, Glasgow (M.)

WOMEN.

Daisy Annabella Murdoch Clark, B.Sc. (P., M.)
Lizzie Thomson Fraser (P., M.)
Helen Mary Gordon (P., M.)
Lila Stephenson Greig (M.)
Mabel Hardie (M.)
Mary Emma Potter (P., M.)
Margaret Mitchell Ritchie (P., M.)
Mary Ann Thompson Ritchings (P., M.)
Mabel Talbot (P., M.)

WE have received the following verses from Dr. Aikman, of Guernsey, who had them from the author, Miss F—— G——, a Falkirk lady. We agree with him in thinking that they may amuse our readers, who will not take them too seriously:—

"IT'S AN ILL WIND THAT BLAWS GUID TAE NAEBODY."

(TUNE—"*The Weary Pund o' Tow.*")

THE weary winds, the weary winds,
The weary winds o' Cannes;
I thocht that they would end my life
Afore I quitted Cannes.
The weary winds, &c.

In ither lands and ither toons
They blaw frae aff ae airt;

But here—ye dunno where ye are—
They blaw frae every pairt.
The weary winds, &c.

They blaw frae every airt at ance,
Aye swirlin' roun' and roun';
It 's ragin' south frae aff the sea,
And wast and east i' toon.
The weary winds, &c.

Whiles if ye find a lownd wee spot,
And, thinkin' o' nae evil,
Tak' aff ye 're coat and sit ye doon,
They 're on ye like the deevil.
The weary winds, &c.

And when ye 're sittin' happy-like,
And thinkin' a' things bonny,
The wicked blasts are blawin' in
Brownkeeties and newmony.
The weary winds, &c.

But, O! the doctors lo'e them weel;
And cauld and cruel, still
They 'd ha'e them caulder, crueller yet;
It 's grist intil their mill.
The weary winds, &c.

And syne ye see them fleein' thick—
B——t foremost in the van;
And J——n S—— is pointed out—
The Scottish rising man.
The weary winds, &c.

Dear Dr. Mac——, in 's wee glass coach,
Runs rattlin' doon the hill;
I 'm sure, if he was Providence,
He 'd gar the winds keep still.
The weary winds, &c.

And mony mair, ower lang to tell;
But each ane—to a man—
A' flourishin' like green bay trees;
They thank the winds o' Cannes.
The weary winds, &c.

Fareweel! fareweel! I 'll come nae mair
To sic a cauldrife clime;
I 'll aff to snug Mentone hie
And roast afore my time.
The weary winds, &c.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1899-1900.

MEETING I.—6TH OCTOBER, 1899.

The President, MR. H. E. CLARK, *in the Chair.*

ON THE CHANGES IN SURGICAL THEORY AND TREATMENT IN THE PAST TWENTY-FIVE YEARS.

BY MR. H. E. CLARK.

Mr. Clark's paper will be found as an original article at p. 305.

MEETING II.—20TH OCTOBER, 1899.

The President, MR. H. E. CLARK, *in the Chair.*

I.—FERTILISATION AND SEGMENTATION IN THE ECHINUS.

BY DR. J. H. BRYCE AND DR. J. H. TEACHER.

Dr. Bryce and Dr. Teacher gave a lantern demonstration of micro-photographs, illustrating the processes of fertilisation and segmentation in the echinus. The preparations had been made from specimens and cultures procured at the Marine Zoological Station at Millport, and the photographs were very successful. The first set of slides was selected to show the progress of segmentation, and was from lower power preparations. The second set was shown under a much higher power, and the photographs were actually from sections of the ova, and illustrated practically all the different stages of fertilisation. In addition to the lantern demonstration, a few of the specimens were shown under the microscope.

II.—CASE OF LARGE MALIGNANT TUMOUR OF THE PYLORUS IN WHICH GASTRO-ENTEROSTOMY WAS PERFORMED, WITH IMMEDIATE RELIEF OF SEVERE OBSTRUCTIVE VOMITING.

By Dr. J. Lindsay Steven and Mr. James Luke.

The specimen submitted for the examination of the Society consisted of the stomach, and the portion of the small intestine which had been placed in communication with it. A very large tumour surrounded and considerably constricted the pyloric orifice, and occupied almost the entire pyloric half of the viscus. The mucous surface of the tumour was extensively ulcerated, and there were polypoid excrescences near the point where the artificial pylorus had been made. Union between the stomach and the intestine was perfect, and the mucous aspect of the aperture of communication between the stomach and intestine had the appearance of a natural opening. The anastomosis had been effected on the anterior wall of the stomach, a little above the greater curvature, and well free of the tumour so far as its extent could be judged on the peritoneal aspect. The reason for fixing the bowel to the anterior surface was, that the tumour was so large that it would have been very difficult to get to a free portion of the posterior wall, and the efficiency of the opening was proved by the immediate relief of the vomiting. No attempt was made to remove the tumour, chiefly because at the operation Mr. Luke felt what he regarded as small secondary nodules on the under surface of the liver. These, however, at the *post-mortem* examination were found to be nodosities of a slightly cirrhotic liver, and in no sense secondary. It was, however, fortunate that no attempt to remove the tumour was made, as at the *post-mortem* examination distinct secondary nodules in the left pleura were discovered. The patient survived the operation in comparative comfort for three weeks, and was able to take an ordinary light diet, which had been impossible for her before.

The following is the history of the case, and the official account of the autopsy:—

Jane H., aged 54, was admitted to Ward 8, of the Glasgow Royal Infirmary, 9th September, 1899. For about a year or so she has not felt particularly well, although she had no special symptom to complain of. Since the beginning of the present year she has been unable to take any heavy food, but has had to confine herself to very light diet. She states that the heavy foods make her vomit; she usually vomits some hours after taking the heavy kinds of food. About the month of March, 1899, she noticed a swelling in her abdomen; it has not increased in size since she first noticed it, and sometimes it entirely disappears. Since the beginning of the present year she has been losing weight. For about a fortnight at the end of last year, her friends told her her face had a yellow colour; she herself did not notice this. Since onset of illness appetite has been good, and bowels have been constipated; she has never noticed any change in the colour or shape of the motions. Until the onset of the present illness she had good health.

Father died at 75, mother died at 55; cause of death is unknown to patient. She has three brothers and sisters alive and well; six brothers and sisters died in early childhood. She has had four children; three are alive and well, one died of measles.

She presents an ill-nourished and wasted appearance. Face is slightly cachectic. Tongue is clean. Pulse numbers 76; it is of small volume and low tension, regular in force and rhythm. Respirations number 14. As the patient lies quietly in the dorsal decubitus, a very obvious swelling, causing considerable prominence of the lax and retracted abdominal wall immediately above the level of the umbilicus, and almost equally on either side of it, is visible. The swelling is elongated in the transverse direction, its lower margin corresponding to about the level of the umbilicus, the upper margin much less definite, and merging into surrounding abdominal wall about two fingerbreadths above the umbilicus. The swelling extends somewhat farther to the left of the umbilicus than to the right. The somewhat nodulated appearance of the skin over it suggests a similar condition of the tumour itself. The mass moves very freely with the respirations, and the tumour appears to be situated mainly in the greater curvature of the stomach; the right extremity of the neoplasm being probably at pylorus, the left being easily palpable as far to the left as one fingerbreadth from the point of the ninth rib. Percussion over the nodule is dull, but immediately below and to either side of it tympanitic resonance is easily obtained. It is apparently absolutely painless on palpation, and can be felt to be finely nodulated. It is freely movable within the abdominal cavity, and she reports that it is sometimes felt much farther to the right than at present. The liver is not enlarged.

The free mobility of the tumour was in favour of the possibility of its removal, especially as no evidence of secondary disease in the liver could be made out. On the other hand, Dr. Lindsay Steven thought that the tumour was so large, and the patient so emaciated, that the issue of such an attempt must be doubtful. However, as the patient was most anxious that something should be attempted, and, as on account of the severity of the vomiting, she had apparently only a few days to live, Mr. Luke agreed to cut down upon the tumour, and do an anastomosis if removal were impracticable. There can be no doubt that the patient's life was prolonged, and her comfort greatly increased by the operation.

Patient died on 11th October, and the following is the report of the *post-mortem* examination:—

"*External appearance.*—A greatly emaciated body. *Post-mortem* rigidity present.

"*Thorax.*—Pericardium presents healthy characters. Heart is small and atrophic, coronary vessels being very prominent, and the muscular tissue has a peculiar round translucent appearance.

"Aortic and pulmonary curtains are competent, and the heart, except for atrophy, presents healthy characters.

"The lower border of the left lung and the left pleura are studded with small tumour nodules, but otherwise present healthy characters. The right lung and the right pleura appear quite healthy.

"On opening the abdomen, the transverse colon is found to be much distended with gas, and also shows prominently below the edge of the costal cartilage.

"*Abdomen.*—The stomach is collapsed and almost empty. Its pyloric extremity is the seat of an extensive mucous epithelioma, causing great narrowing of the pylorus. A loop of upper part of jejunum has been stitched to the lower border of the stomach, about midway between the cardiac and pyloric ends, and a very perfect opening and connection between the stomach and intestine has been formed. Near the opening there is a villous polypus, about the size of a pigeon's egg, connected by a pedicle with the mucous membrane of the stomach and the stomach wall above. The opening shows extensions of the epithelioma towards the cardiac end.

"The liver is small, and appears in a somewhat cirrhotic condition, with numerous cyst-like dilatations of the vessels and ducts. No secondary tumour formation is found in it. Gall-bladder is small, and contains fluid bile.

"The spleen is very small but congested.

"Pancreas is of fair size, and appears healthy.

"Lymphatic glands of mesentery are, many of them, enlarged, apparently from secondary tumour formation.

"Suprarenal bodies present healthy characters.

"Kidneys are small, and show advanced interstitial nephritis, with numerous urinary cysts.

"Left ovary and Fallopian tube are adherent to upper surface of uterus from some old inflammatory change. Right ovary is healthy, as are the other pelvic organs.

"Intestines present healthy characters.

"Stomach, with attached portion of jejunum, is preserved. A portion of the liver is also preserved for further investigation."

III.—CASE OF SEVERE HÆMATEMESIS FROM A SIMPLE ULCER OF THE STOMACH, IN WHICH THE STOMACH WAS OPENED AND THE EDGES OF THE ULCER BROUGHT TOGETHER BY SUTURES.

By Dr. J. Lindsay Steven and Mr. James Luke.

Dr. J. Lindsay Steven submitted the specimen, and read the following notes of the case:—

On a previous occasion I presented to the Society specimens in which death resulted from severe hæmorrhage due to "pore-like" erosions of the gastric artery, and in one of which my colleague, Mr. Pringle, opened the stomach in a vain endeavour to find and close the bleeding point. I propose to-night to show you a preparation from the stomach of a man who was admitted under my care on the 2nd October, 1899, on account of severe hæmatemesis. The hæmorrhage in this case was perhaps neither so profuse nor so continuous as in the previous cases.

It had, however, recurred on a number of occasions since the month of July, 1899, and he was suffering from an exceptionally severe seizure at the time of his admission, large quantities of rich coffee-coloured fluid being evacuated. He was very weak and very greatly emaciated, the abdominal wall being excessively retracted. For about five months before admission, he had been much troubled with loss of appetite, pain after food setting in usually about two hours after a meal, and frequent attacks of vomiting. His bowels were very much constipated. The retraction of the abdomen was so great as to resemble that frequently observed in emaciated cadavers. The patient was a married man, aged 38, whose previous health and family history were quite satisfactory. The heart and the lungs were found to be healthy, and I formed the opinion that the hæmorrhage was in all probability coming from an ulcer, and the excessive emaciation seemed to me likewise to indicate that the ulcer might be malignant. I did not think that the lesion was likely to be a "pore-like" erosion, as there was an entire absence of the terrible arterial bleeding, both from the gullet and rectum, which was such a striking feature in the cases previously brought under the notice of the Society. As, however, the man's life was in some jeopardy, and he was very willing to submit to anything which promised even a chance of relief from recurrence of the hæmatemesis, he was transferred to Ward 17, under the care of Mr. Luke, on the 5th October. For some time after his admission to the surgical ward the hæmatemesis ceased. It recurred very severely on the 15th October, blood being also passed from the intestine. Mr. Luke and I saw him in the evening, when he was found to be much exhausted, and we agreed that the operation should be performed at once.

The specimen shows the pyloric end of the stomach. The sutured wound, through which the gastric cavity was exposed, is seen in the anterior wall; and near the pylorus the simple ulcer, from which the bleeding took place, is observed. The edges of the ulcer, except at the distal extremity, have been firmly brought together by three sutures. In addition to this recent ulcer, the ring of the pylorus is observed to be considerably contracted by fibrous tissue, the result of the cicatrisation of an old ulcer. There was no evidence of the ulcer being malignant in nature.

Mr. Luke then described the stages of the operation which he had performed. The site of the ulcer was readily recognised by the presence of fibrous bands which had been formed between the peritoneal surface of the stomach, corresponding to the site of the ulcer, and the under surface of the left lobe of the liver. In order to get sufficient room to permit of the stomach being opened, these adhesions had to be partially separated. When the finger was introduced, the floor of the ulcer lying close to the pylorus was easily felt. The surface of the ulcer was then scraped with a Volkmann's spoon, and, with considerable difficulty, owing to the adherent peritoneal surface, its edges were brought together by three sutures. Intravenous injection of saline solution was practised before removing the patient to his bed. He recovered from the chloroform, and was able to speak to those waiting upon him, but he sank from exhaustion two or three hours after the completion of the operation.

IV.—CASE OF PURULENT PERICARDITIS.

BY DR. J. LINDSAY STEVEN.

The specimen which I now submit for your inspection was obtained from the body of a female child, aged 2¼ years, who was under my care in the Royal Hospital for Sick Children in September last. The specimen consists of the heart and pericardium, both surfaces of which are thickly covered with pus-infiltrated fibrin. The wall of the pericardial sac is greatly thickened, and its cavity greatly enlarged. At the *post-mortem* examination the pericardial sac was found to contain about 3 oz. of creamy-yellow pus. The heart was found to be displaced upwards and towards the right, its apex being in the fourth interspace, close to the edge of the sternum. There were old pleural adhesions at the base of the right lung, and a recent fibrinous pleurisy of moderate severity was found on the left side. The peritoneal cavity contained a small quantity of pale straw-coloured fluid, and there were flakes of recent fibrin on the surface of the liver. The bronchial tubes presented well-marked congestion of their mucous surfaces. The other organs of the body presented, on the whole, healthy characters. The interior of the heart has not been examined.

The child was admitted to the hospital on the 24th August, 1899, presenting the symptoms of broncho-pneumonia. Fifteen months before her admission she had suffered from measles, followed by a pulmonary complication from which she recovered well. She remained well till July, 1899, when she had inflammation of the lungs, and was laid up for a fortnight. After this she never recovered her health, and was admitted much emaciated, sweating profusely day and night, and with a temperature ranging between 100° and 102° F. There was well-marked evidence of rickets. She had very little cough; but there were distinct dulness and diminished breathing at the base of the right lung behind. The left lung appeared to be healthy. The respirations averaged about 40, and the pulse about 130. The heart presented nothing abnormal, and there was no enlargement of the cardiac area. The child remained in much the same condition until 6th September, when a change for the worse was observed. The breathing became much more rapid, though not greatly embarrassed, and the pulse frequently was over 160. The temperature, which for a few days before this had been somewhat lower, never became much higher than it was at the time of admission. Perhaps, however, the most striking change was that observed in connection with the cardiac dulness. The area became much enlarged, extending upwards to near the manubrium sterni, and laterally to half an inch beyond the nipple on the left and to an inch and a half beyond the edge of the sternum on the right. There never was any doubt in my mind that this dulness indicated pericardial effusion; the heart sounds were muffled and distant, but pericardial friction was never detected. In the course of a day or two the area of cardiac dulness became somewhat diminished, but beyond this no material change took place, and the child died on 19th September without any further clinical development, except great cyanosis and lividity of the fingers and toes during the last two days of life.

The chief point which indicated the onset of the pericardial effusion was no doubt the great and somewhat sudden enlargement of the cardiac area, and this of course explained the increase in frequency of the pulse and respiration. There was never, however, any of the extreme distress of breathing or great irregularity of the pulse which so commonly accompanies pericarditis with effusion. In this case I did not seriously consider the propriety of performing paracentesis pericardii, because I regarded the effusion as in all probability serous, and the slight diminution in the extent of the dulness which occurred after a day or two led me to suppose that absorption was in progress. Had, however, the operation been performed in the situation which a previous experience would have led me to select—viz., the fourth interspace, about half an inch to the left of the sternum—I cannot help thinking that the point of the needle would have entered the wall of the heart, which, as the *post-mortem* showed, was displaced upwards and towards the right, and somewhat firmly fixed in its abnormal situation. Another point of interest in the case was the evidence afforded by the autopsy of the tendency of the other great serous cavities to partake in the acute inflammation which had so seriously involved the pericardium. This is a feature of purulent pericarditis of which I have already had experience. Had I known at the beginning that the effusion was purulent, I would not have hesitated to ask a surgical colleague to open and drain the pericardial sac, although, from the tendency to involvement of the pleura and peritoneum in such cases, the result of such an operation could not be regarded as altogether hopeful; still I think it would have given the patient the best chance.

V.—CASE OF PURULENT PERICARDITIS IN WHICH PARACENTESIS PERICARDII WAS PERFORMED.

BY DR. J. LINDSAY STEVEN.

In connection with the case of purulent pericarditis which I have just described, it will be interesting to the Society if I now submit the notes of the only other case of the kind with which I have had to deal clinically. In this instance the disease occurred in a man, and paracentesis pericardii was performed, with the evacuation of 19 oz. of pus from the pericardial sac. The patient only survived the operation for some six hours, but the clinical history and the facts revealed on *post-mortem* examination seem to me to indicate clearly enough that the result would in all probability have been the same even if the operation had been performed a day or two earlier. This case, like the former one, illustrates that the inflammatory process in purulent pericarditis may not be confined to the pericardium itself. Both pleuræ were somewhat extensively involved, and the lower lobe of the right lung was found to be in a state of red hepatisation. With such a combination of morbid processes, the relief afforded by paracentesis is very likely to be only of a temporary character. I shall now read the notes of the case as they were entered in the Ward Journal by my assistant, Dr. Archibald Young, to whom I am indebted for the great care he bestowed upon the case.

James D., æt. 35, was admitted to Ward 7 of the Glasgow Royal Infirmary on 22nd February, 1896, complaining of shortness of breath of a fortnight's duration.

At the age of 19 he joined the army, and was in service as a soldier for six years and four months, during which time he was in a number of places—viz., Malta, Plymouth, Chatham, Aldershot (twice), Egypt (fifteen months, in the course of which he was in the engagement of Tel-el-Kebir). The only place where he found his work heavy was at Aldershot, where in summer time the training is very severe.

He emphatically denies ever having had venereal trouble, and indeed he maintains that up to the last fortnight he was an exceptionally healthy man. From the time he left the army in 1885, he has been employed mostly in shipbuilding yards, where he has exceptionally heavy lifts (iron plates). He never felt himself get a strain. For three weeks he has been unemployed; at the end of his first week he began to feel out of sorts, and in course of the next day or two a slight cough, which he has had for some six months, became much worse, and his friends told him he was failing. Gradually he found himself getting breathless, the breathlessness not causing him any particular anguish, but the hurried breathing, as he says, being beyond his control. First noticed in any striking way in connection with a somewhat severe precordial pain developed upon undue exertion, but later being almost constant and for the past week so extreme as almost to amount to "orthopnœa." For the past fortnight, too, his legs have been œdematous, particularly so after his being upon his feet for some time. With the cough there has been, for the past two weeks, a rather more copious expectoration of a frothy aërated type. He still takes his food well, and his bowels are regular; he knows of no urinary trouble. He has had no sickness or vomiting.

His father died eight months after a fall; his mother suffered much from some "asthmatic" trouble. He has three brothers and one sister living; a brother and sister died in infancy, cause of death unknown.

He has been a pretty heavy drinker, and he confesses that just before he took ill he had had a drinking bout, and lay out one night, and felt thoroughly chilled on waking in the morning.

The most prominent feature in the case is the "dyspnœa," which at time of note almost amounts to orthopnœa.

The respirations, at present numbering 36 per minute, are shallow and rather noisy, expiration being accompanied by slight gurgling of mucus in the throat.

The pulse numbers 96 per minute, is very distinctly intermittent, missing a beat at irregular intervals of 5, 8, 11, &c. Its tension is low, but the force of the successive beats seems constant.

His temperature on admission was 98° F.; at 6 P.M., 99·6° F.; and at midnight, 98° F. At intervals he has a rather troublesome cough, and the spit is of a highly aërated frothy type, with a more fluid portion which is somewhat brown.

His tongue is moist, slightly coated, and flabby.

The pupils are equal, medium, and respond to light and convergence.

On examination of the chest the following points are made out:—The percussion note over the lungs, back and front, is highly resonant, except possibly at the right base posteriorly. On palpation over the right lung at its lower part in front, posteriorly, and in the infra-axillary regions, a very marked fremitus, evidently bronchial and not pleural, is remarked; this is very slightly developed on the left side.

Vocal fremitus and resonance are investigated without result. The respiratory murmur all over both lungs is very markedly bronchial; expiration distinctly prolonged, and over the right base posteriorly almost imparting a typical tubular quality. A good deal of sonorous râle everywhere accompanies the respiratory murmur, particularly the expiratory portion, and especially so over the right base.

The cardiac dulness is much enlarged. At greatest transverse width it amounts to 5¾ inches, the right border being about 1¼ inch to right of middle line, the upper traversing the third rib, the outer 4½ inches from middle line. The apex beat is neither visible nor tangible, and the cardiac sounds can hardly be heard either at apex or base. There is no precordial bulging or suprasternal pulsation.

The liver dulness at middle line measures 1½ inch, in nipple line 3¼ inches, and in mid-axillary line 3½ inches. The stomach seems dilated, and percussion over the epigastric region gives a dull note, but with a rather tympanitic quality. There is a sudden transition from the dull to the highly resonant note over the rest of the abdomen, the dull area having a crescentic outline reaching to within 1¾ inch from umbilicus, and passing more to the right than to the left.

The abdomen generally is large, and its walls resistant, preventing deep palpation. The legs, from the knees down, are some what œdematous.

The urine, of a rather high colour, is acid in reaction; specific gravity 1016, slightly albuminous, with a copious deposit of urates, and to the microscope showing amorphous urates and a few granular or fatty casts.

23rd February, 1896.—Pulse to-day exceedingly irregular in rhythm; the beats chiefly, however, going in pairs, suggesting the "pulsus bigeminus." This character, although not constant, is fairly well brought out by the sphygmograph, and, in addition, there is seen in the tracing a markedly hyperdicrotic character, making each successive two beats seem like four. Spit still abundant and bronchitic.

24th February, 1896.—To-day patient feels rather better, though still breathless. The pulse is still markedly intermittent and difficult to count. The cardiac dulness is made out to-day to measure fully 6 inches across its right border, fully 1½ inch to right of middle line, its upper border crossing the second rib, and its outer border just outside the former mark. The heart sounds are still almost inaudible, a little better heard, however, towards the sternum. There seems to be slight precordial bulging. The cheeks, tips of ears, and nose seem very ruddy.

25th February, 1896.—The complaint is still of dyspnœa; he has no pain, and he says if his breath were better he would be all right. Expectoration still abundant and very frothy, of a muco-purulent type. Decubitus, half-sitting up on the right side, with a tendency to turn on the face. Distinct œdema of the back of the right hand. Pulse still highly irregular and intermittent, and is on that account difficult to number. Respirations still accompanied by much wheezing and mucus gurgling in the throat, equal to 32 per minute. At eight o'clock this morning the temperature was 101° F., having never previously reached a higher point than 99·6° F. Transverse measurement of cardiac dulness 6⅛ inches to-day, right border 1¾ inch to right of middle line, left 4¼ inches to left of middle line, upper border at upper edge of second rib. The sounds are very distant, especially at apex, where they are almost inaudible, unaccompanied by friction sounds. On careful inspection, it is thought that there is very slight bulging in the precordial area, *i.e.*, between the left nipple and the sternum. Bronchial fremitus is still very marked over the lower part of the right lung, and the excess of sonorous and moist râle in the right lung as compared with the left is probably explained by the tendency to lie on the right side. The urine this morning is loaded with pink urates; specific gravity 1022, and containing a moderate trace of albumen.

27th February, 1896.—The patient has had a very restless night, chiefly owing to the extreme dyspnœa which has all along formed his only complaint. In view of the performance of paracentesis pericardii, Dr. Middleton was asked to see him in consultation this morning, when an enormous extension of the dulness was found to have taken place.

On the whole, Dr. Middleton's outline, especially as regards the upper margin, was higher slightly than that afterwards made out by Dr. Lindsay Steven. As regards the extension of the dulness into the right mammary region, Dr. Lindsay Steven carried the upper margin of this about a finger-breadth higher than that mapped out by Dr. Middleton.

The upper margin of this portion of the dulness cut the third right rib, and extended towards the axilla as far as the anterior axillary line, where it was replaced by a dull tympanitic note having a definitely Skodaic character. Superiorly, the upper level of dulness reached quite to the first intercostal space, Dr. Middleton carrying it a little higher than this. The upper limit of the cardiac dulness had quite definitely a cone shape. The left border slopes gently down and to the left, passing distinctly outside and above the nipple as far as the anterior axillary line. It thus happens that below the line of the nipples, the percussion from axilla to axilla is absolutely dull.

The cardiac sounds were quite inaudible to-day. Distinct dulness is found at the right base posteriorly, merging into the Skodaic percussion in the right infra-axillary region. This dulness extends as high as the level of the fifth rib, and Dr. Middleton was of opinion that the whole right back posteriorly had an impaired percussion tone. On ausculation over the dull area, distinct bronchial breathing, with moist and dry râle, was audible, and over both lungs behind abundant bronchitic râles could be made out. In the left interscapular region, from the third to the sixth dorsal spine, a limited area of dull percussion was distinctly made out. In the epigastric region a rounded resistant mass, filling the whole hollow of the hand, and evidently a much depressed left lobe of the liver, is easily made out. The lower margin of hepatic dulness is greatly depressed.

It was agreed that all the evidence pointed to a very large pericardial effusion of renal rather than rheumatic origin. It was not decided as to whether the whole of the right mammary dulness was due to pericardial distension, and the possibility of there being a localised pleural effusion as well was kept in view. Dr. Middleton agreed with Dr. Lindsay Steven in thinking that, in the face of no improvement taking place in the respiration soon, it would be proper to tap the pericardium.

11 p.m.—About 8 P.M. to-night, no improvement having occurred, Dr. Lindsay Steven introduced a trocar and canula through the fourth left intercostal space, about 1 inch to the left of the sternum. With some difficulty a thick purulent fluid began to flow, at first slightly mingled with blood. With the aid of the exploring syringe the flow was rendered more rapid, apparently by the removal of some thicker material, into which the canula's point had first been inserted; once the flow was thus established it kept on very steadily, and in the course of three quarters of an hour exactly 19 oz. of thick, creamy, non-odourous pus were removed. At the end of this time, however, as the patient was complaining loudly of his inability to bear the operation longer, the canula was withdrawn, although it was pretty certain that a considerable quantity of pus still remained in the pericardial cavity.

Upon microscopic examination, the most characteristic pus corpuscles are seen. The pulse fluctuated considerably during the tapping, and after the puncture had been dressed the patient, though admitting his breathing to be easier, complained of a generalised pain over the left side.

Note by nurse from 11 P.M. to time of death at 2·50 A.M.:—

"*27th February, 1896* (*11 p.m.*).—Patient is very restless, complaining of pain in the left side. He seems unable to lie on the right side, finding greater relief in sitting up in bed. Patient has coughed very little within the last hour, but has great difficulty in breathing.

"*1 a.m.*—Had hypodermic injection (one eighth of a grain of morphia) given, and a small linseed poultice applied to the left side. Patient is very much troubled with thirst; has had small pieces of ice to suck.

"*2 a.m.*—Patient has not slept any; very restless, and still sitting up. Has been wandering very much in his talk. Breathing still very bad, but does not complain so much of the pain in his side or chest. Pulse 45. Poultice renewed."

The following is the *post-mortem* report by Dr. Charles Workman:—

"Body that of a well developed and well nourished man. Rigor mortis pronounced. On the front of the chest there is the mark caused by a trocar passed in to drain the pericardium. On opening the thorax, about a pint of greenish opalescent fluid escapes, along with some flakes of fibrin, from the left pleura, which is in the condition of an acute pleuritis.

"The right pleura contains but little fluid. The left lung, except for the pleurisy, is in a very healthy state. The lower and middle lobes of the right lung are in a state of red hepatisation, the consolidation being very firm, and over this part of the lung there is a fresh fibrinous pleuritis. The pericardium is greatly thickened and congested. The cavity is lined with a thick, firm layer of fresh yellow fibrin, and filled with yellow 'laudable' pus (12 to 15 oz.). The parietal and visceral layers are closely adherent over the front of the heart, probably from a former attack of pericarditis.

"The right ventricle is dilated, and filled with coloured clot. The left is collapsed and almost empty, its walls somewhat hypertrophied. Aortic and pulmonary curtains competent. Other valvular structures also healthy. Aorta healthy.

"Stomach and intestines examined from without are healthy. Stomach perhaps somewhat larger than usual, but of normal shape.

"Pancreas healthy. Spleen congested, but not much enlarged. Liver large, and on section has appearance of pronounced passive hyperæmia. Gall-bladder contains fluid bile, and is quite healthy. Kidneys of fair size; their capsules, however, removed with difficulty, leaving a roughened cortex. On section, they are seen to be much congested, but the cortex is not much atrophied."

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1899-1900.

MEETING I.—9TH OCTOBER, 1899.

The President, DR. THOMAS BARR, *in the Chair.*

I.—CASE OF VALVULAR STRICTURE OF THE ŒSOPHAGUS, WITH DIVERTICULUM—GASTROSTOMY—DEATH FROM PERSISTENT VOMITING.

BY DR. H. RUTHERFURD.

This patient came under my care in the Royal Infirmary, in the absence of Mr. H. E. Clark, on the 19th August last.

She was a woman of 35, who had been admitted to the medical wards ten days previously, on account of more or less persistent sickness, and the inability to retain any form of food taken by the mouth. Her troubles extended over a period of at least six years, previous to which the other members of her family began to be aware of them, from her frequently rising from table to relieve herself by vomiting. Since then she had been little at home, and her relations could say little about her. No history of traumatism obtainable. She herself was in a condition of extreme emaciation and enfeeblement, and was only kept alive during her stay in hospital by the use of nutrient enemata.

The actual condition was at first obscured by the character of the vomited matter, which was green or muddy, with smell of intestinal contents, and fairly copious; there was, on the other hand, no tenderness suggestive of gastric ulcer, no local tumour at the pylorus or lower down, and no gastric or intestinal distension. At the request of Dr. J. W. Allan, Mr. Clark examined her, and found an obstruction in the œsophagus, 12½ inches from the teeth. No bougie could be made to go any farther. It was obvious that for anything to be gained by operation, this must be done without delay, and she was accordingly transferred to Ward 26.

On the morning of 19th August the patient was taken into the theatre for operation, but before beginning I thought it right to satisfy myself that no bougie would pass. I was still so much impressed by the character of the vomiting, that I said to my assistants that I should examine the stomach and pylorus before doing a gastrostomy. The skin incision was done under cocaine anæsthesia by the infiltration method, but the subsequent handling of the wound caused so much distress that the abdominal opening had to be completed under chloroform.

No tumour was found. The stomach was in a state of by no means extreme contraction, and I proceeded to do Witzel's operation. A No. 12 rubber catheter was passed into a small opening in the stomach, then buried by the infolding of the wall upon it for a distance of about an inch and a half, and finally the stomach wall brought up to the abdominal wall by six matress sutures of silkworm-gut. The abdominal wound was then closed around the tube. By this procedure it is possible to begin feeding at once, and this was done before the patient left the table. In spite of my previous knowledge of the case, I was somewhat surprised to see the milk which was used immediately ejected from the patient's mouth.

No more attempts at feeding by the mouth were made after this, small quantities of peptonised milk, hot water, and brandy being given by the tube. Vomiting, however, went on almost constantly, and always succeeded the administration of fluids. The patient died at nine o'clock the following evening, or about thirty-six hours after the operation.

On laying open the œsophagus, a distinct pulsion diverticulum is found in front and to the right side of the œsophagus. Into this the distal internode of the index finger can be laid—its floor and lower margin forms an almost completely diaphragmatic stricture, which, when the diverticulum is distended, is brought closely into contact with the opposite (left) wall of the œsophagus in valvular manner. It is plain that the floor of the diverticulum would be in the axis of the œsophageal lumen, and would intercept any bougie in its passage downwards. The edge of the stricture is about 1 inch above the cardiac orifice of the stomach.

The intestines were normal.

Dr. Middleton asked if the food could have been retained in the diverticulum and vomited without reaching the stomach. It was very singular that the vomited matter should be from the stomach when one considered the situation of the lesion.

Dr. Ness asked if the greenish matter was in small quantity, and distinct from food which was vomited at other times.

Dr. Rutherfurd, in reply, said that the vomiting had no relation to food eaten, either in quantity or quality. She had been taking infinitesimal quantities of peptonised milk, and yet retching had ensued, followed by vomiting of contents of small intestine. He could only account for the vomiting by presuming it to be "reflex," or due to vicious habit.

II.—CASE OF OCCIPITAL MENINGOCELE, AND PATIENT FROM WHOM IT WAS REMOVED.

By Dr. H. Rutherfurd.

The patient was a child of 7 months, the subject of an occipital meningocele, something less than the size of an egg. An aperture could be felt, and is still perceptible, just below the external occipital protuberance.

The tumour was removed by the formation of flaps above and below and the transfixion of the sac by three interlocked sutures of catgut.

The child, so far as can be made out, is imbecile.

Dr. Barr asked if nasal obstruction accounted for the mouth-breathing of the patient.

Dr. Rutherfurd, in reply, stated that there had been no difficulty with the anæsthetic, and that he considered the open mouth to be simply an accompaniment of the imbecile condition of the child.

Dr. Reid related a case in which, in the pre-antiseptic days, he had removed a meningocele in a child aged 3 weeks. The child died at the age of 5 years of scarlatina, and while it showed a well-marked aperture in the bone, suffered from no mental defect. There was no difficulty in the parturition, although at birth the tumour formed a mass larger than the fist.

III.—CASE OF VAGINAL HYSTERECTOMY FOR MALIGNANT DISEASE.

BY DR. W. L. REID.

G. S., æt. 38, admitted 11th September, 1899. Patient began to menstruate at 15, and was regular and normal till January last, when she began to have a watery discharge tinged with blood during the menstrual intervals. Since May she has had constant discharge of blood, so that the menstrual period could not be recognised, and she became very pale and weak. She saw Dr. Turner at the Dispensary in July, and was advised to come into the Infirmary.

On 12th September she was examined, and the cervix uteri seemed sound, but much flattened. The fundus was about the size of an orange, and movable. The sound passed only to 2½ inches. There was no fœtid discharge, but fluid blood flowed freely from the cervical canal.

As it was thought the uterus contained a polypus, it was decided to split the cervix and, after dilatation, use the curette. This was done on 13th September. The vagina had been so narrow that one finger could be passed only with difficulty, and the speculum could not be used at all. Now, when the cervix was exposed under chloroform, some bits of soft tissue were found in the canal, and this raised the suspicion of malignancy. The cervix was only slightly cut posteriorly, and a small curette passed. A teaspoonful of soft tissue was removed and sent to the pathologist, who reported that "the fragments of tissue examined show a very marked hypertrophy of glandular structures. No definite evidence of malignancy, although the appearances are such at parts as to raise at least suspicion. The appearances are those of glandular hypertrophic endometritis."

As the clinical aspects of the case were bad, and as the pathologist stated that if the tissue came from the cavity of the uterus it was likely to be cancerous, we decided to perform a vaginal hysterectomy, and on 20th September this was done, but with great difficulty on account of the narrowness of the vagina. We were unwilling to cut the perineum, owing to the risk of infection. For this reason also, and to avoid blocking the vagina by tenacula, the cervical canal was closed by sutures, which were left long.

The difficulty of ligating the broad ligaments was very great, as when the uterus was brought a little way down it blocked the vagina. The modification of Jessop's needle which is now shown was of great assistance, but the upper part of the ligaments could be reached only by retroverting the uterus until they came into view in Douglas's pouch. The ligatures used were of chromicised gut, and were cut short immediately after being tied, to avoid being pulled off the stump. Only the inner portions of the tubes were removed, as they and the ovaries felt normal.

The peritoneal wound was not closed, but simply dried and drained with iodoform gauze, which was removed two days afterwards, and found sweet and without the slightest stain of blood. A fresh piece of gauze was put in for other two days, since which the vagina has been washed out by a boric acid solution.

The patient has made a good recovery, not having suffered any pain, and her temperature only once or twice rising a little over 100° F. There has been little discharge, and no fœtor at any time. Some of the ligatures have come away with the douche, some are still (twentieth day) in position.

On 16th October patient was dismissed, feeling well and with no vaginal discharge. On examination, only a puckered depression was felt in the vaginal roof. The patient promised to return at regular intervals for examination.

Pathological Note by Dr. A. R. Ferguson.—The uterus as removed is shown. It has been laid open anteriorly in the middle line. The greater part of the specimen is occupied by greatly dilated cervix, which is filled with irregular polypoid or shaggy masses of cancerous tissue. A portion of this tissue, including muscular wall or cervix, shows the growth to consist of a large number of more or less tubular processes lined with a cylindrical epithelium. More deeply, the type of epithelium is less distinctly cylindrical, and in places evidences of transition towards a squamous epithelial type are plainly seen. These occur mainly towards the zone of infiltration of the muscular coat. The cavity proper of the uterus is not invaded by the growth.

Dr. Reid said that he desired opinions on the following:—He had observed on several occasions that when a drain or packing of iodoform gauze had been used, the gauze in the wound did not show any blood-stain, although there might have been considerable evidence of such on the superficial dressings. He desired to withold his view till hearing those of members of the Society.

Dr. J. K. Kelly asked as to the nature of the polypoid masses in the upper end of the uterine cavity.

Dr. Ferguson replied that they were papillomata.

Dr. Kelly asked if Dr. Reid had not thought of incising the narrow vagina to facilitate the manipulation required in the performance of the operation. The sutures must have been applied with difficulty, even by means of Dr. Reid's special needle. The vagina could have been sutured again at the close of the operation. As regards the staining of the gauze drain, he was familiar with the fact that the portion of gauze in the wound remained unstained, while the external portion was markedly coloured with blood. He thought that the blood was washed through deeper portions of gauze, while it stained superficial portions where it would remain for some time. The benignancy of condition in the body of the uterus was strange, as to the naked eye it was plainly malignant.

Dr. Edington had observed the gauze-staining phenomenon in cases of wounds made in the neck. He was inclined to coincide with Dr. Kelly's view that the blood was washed through the gauze by subsequent serous effusion from the tissues.

Dr. Reid, in reply, stated that he had not incised the perineum in case of infecting the wound from the malignant cervix. He would prefer to get at the upper parts of the broad ligaments through an abdominal section. The modification in Jessop's needle consisted in a groove, above the eye, and crossed by the ligature. Where the latter crosses the groove, it can be easily hooked up without undue strain, and consequent weakening of its strands. As regards the gauze-staining:—In one case he covered up the gauze completely in the tissues to prevent "washing away" of the blood corpuscles, but even then the gauze remained unstained. His theory was that iodine is set free by the serum. The iron combines with the iron in the red corpuscles, forming iodide; the blood is thus decolourised in the gauze.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1899-1900.

MEETING I.—4TH OCTOBER, 1899.

The President, DR. W. L. MUIR, *in the Chair.*

RETROSPECTIVE.

BY DR. W. L. MUIR.

The opening meeting of the seventh session took place on the above date, when Dr. Muir delivered his presidential address, entitled "Retrospective." Dr. Muir, in reviewing the changes that have come over the practice of medicine since the time of his apprenticeship in the early sixties, gave some interesting reminiscences of the old blood-letting days. It was then not only the infallible practice to bleed for all acute inflammations, often till the patient fainted, but it was a regular occurrence to bleed for no disease at all, farmers and other full-blooded rustics calling at the surgery on market days to get the doctor to draw a little blood, under the impression that they would be better without it. Leeches, instead of the lancet, were also invariably employed for local and chronic affections, there being never less than from 200 to 300 leeches, the doctor declared, in his principal's surgery for this purpose. Cupping, also, was greatly in vogue; indeed, Mr. Hilliard's position in the Glasgow Royal Infirmary, when Dr. Muir was a student, was that of "Infirmary cupper." The arguments for and against the practice of blood-letting were detailed at some length, the President concluding that surely these shrewd old Scottish empirical practitioners, who were good observers (though their instrumental aids to that end were few to those of to-day), could not be so terribly astray in their views as to the value of this method of treatment; and that it seemed a fair inference, backed up by his own experience, that in abolishing this practice of blood-letting, the profession had discarded a potent means in the treatment of acute disease.

Attention was next called by Dr. Muir to the alteration in the attitude of the profession towards the use of alcohol in acute diseases. Then the more wonderful revolution in the treatment of consumption by abundance of fresh air and superabundance of good food was commented on, the President describing a visit he had lately paid to the Ventnor Sanatorium, in the Isle of Wight. It was pointed out how unreliable any statistics as to cure, &c., could be, since the rule of this institution was that no advanced case of phthisis be admitted, and every patient showing no improvement at the end of three weeks be at once discharged.

Dr. Muir concluded by considering the many improvements that have taken place in the medical curriculum.

On the motion of *Dr. J. R. Buchanan*, Dr. Muir was accorded a hearty vote of thanks for his interesting address.

MEETING II.—18TH OCTOBER, 1899.

The President, DR. W. L. MUIR, *in the Chair.*

DISCUSSION ON LOCAL ANÆSTHESIA AND LOCAL ANÆSTHETICS.

DR. J. HINSHELWOOD introduced the subject by reading a paper " On the Use of Holocaine in Ophthalmic Practice," and emphasised its value over that of cocaine. The benefits of this new local anæsthetic briefly are—two or three drops of a 1 per cent aqueous solution cause, in from fifteen to thirty seconds, a complete anæsthesia of cornea and conjunctiva, which anæsthesia lasts from five to ten minutes; there is no alteration in the size of the pupil, no disturbance of accommodation, and no change in the tension of the globe; the corneal epithelium, even after repeated instillation, retains its normal appearance, remaining smooth, moist, and glistening; it causes no contraction of the blood-vessels; and, lastly, it is antiseptic. Dr. Hinshelwood has never observed any toxic effects from the use of holocaine, though Heinz has found by experiments on animals that, hypodermically, holocaine is more toxic than cocaine or eucaine. This last observation has deterred Dr. Hinshelwood so far from using this drug hypodermically; he has, however, employed holocaine, as the anæsthetic in practically every operation coming within the sphere of the ophthalmic surgeon, with the exception of enucleation of the eyeball. It was pointed out that the holocaine solution must be prepared with the greatest care, and all the glass vessels and bottles used in the preparation or storage of the solution must be dealkalinised by boiling them in a weak solution of hydrochloric acid for from half an hour to an hour.

In conclusion, Dr. Hinshelwood spoke highly of holocaine as a sedative in the painful attacks of glaucoma; and in the removal of foreign bodies from the eye, he deemed it especially useful for its combined anæsthetic and antiseptic action.

DR. SERVICE followed with "A Personal Experience of Cocaine Poisoning." While suffering from toothache, he applied to the painful tooth, on a small piece of cotton-wool, a solution, containing at the outside one grain and a half, but certainly not less than one grain of cocaine. In about half an hour the toothache had passed away. Shortly after this he began to feel *queer*, with blurred and double vision, dryness of mouth and throat, and thereafter an unbearable and unquenchable thirst. Two hours later he went out to make a call, and though dazed and stupid managed to reach his destination. He asked his patient if he observed anything peculiar about him, and the patient candidly told him that he thought he was drunk. He found his way home unaided, and suffered from frequency of micturition and an inability to empty his bladder thoroughly. Feeling now that he had poisoned himself, he took the antidote *whisky* in doses of half a glass every half hour. He went to bed but could not sleep, was restless, and suffered from twitching of the left arm and leg. A kind of delirium now set in, and dreams and visions, none of which were unpleasant, followed in rapid succession. About eight hours after taking the drug Dr. Service ceased to be conscious of his surroundings or his feelings. The late Dr. Mather was called in, and found his patient in a semi-comatose condition, with dilated pupils and a very rapid and weak pulse. Mustard poultices were applied over the heart and the nape of the neck, and two large cups of strong tea were administered. A disturbed sleep followed, and next morning Dr. Service awoke to the world feeling weak and tired, but three or four days had elapsed before he was comparatively well, and for months afterwards he thought himself suffering from the weakening effects of the drug. In conclusion, Dr. Service remarked that he felt his moral sense so seriously shaken while under the influence of the cocaine, that he would consider anyone in similar circumstances irresponsible for whatever he or she might do.

Dr. M'Kail then read a paper "On the Use of Eucaine," which he considered a most satisfactory local anæsthetic. He has employed it in small operations, tonsillotomies, and teeth extractions with perfect satisfaction to his patients and himself. The local anæsthesia is complete, and there are none of the disastrous after-effects so frequently got with cocaine. Unlike cocaine, it is stable in solution, and can be sterilised by boiling. In minor surgery, solutions of 2 to 5 per cent were recommended to be used hypodermically around the seat of the operation, the eucaine being injected, not only under, but into the skin. With a 5 per cent solution the full anæsthetic effect is produced in a few minutes. One half to three grains of eucaine are usually sufficient for most minor operations, but up to ten grains can be safely injected. In dental work one-third of a grain suffices. In tonsillotomies the tonsil is swabbed with a 10 per cent solution at intervals of two minutes, and after four applications the anæsthesia is complete. Solutions stronger than 5 per cent must be used while warm, else the eucaine crystallises out. So far, the only objection urged against eucaine is the time it takes to act, viz., one to five minutes, but this seems a small matter in view of the many other advantages.

Drs. William Findlay, Sam. Sloan, Thos. Russell, and *John Patrick* took part in the discussion which followed, and *Dr. John Patrick* described three cases of cocaine poisoning which had come under his own notice.

REVIEWS.

Intestinal Obstruction: Its Varieties, with their Pathology, Diagnosis, and Treatment. By Frederick Treves, F.R.C.S. London: Cassell & Company, Limited. 1899.

It is about fifteen years since Mr. Treves published his first work on intestinal obstruction. This original publication, essentially the substance of the Jacksonian prize essay, had stamped upon it, at the very outset, the mark of future success. How correct was this initial forecast is well attested to by the reprints through which the first edition passed, and the exceptional reputation which it has gained for its distinguished author. Mr. Treves' experience in the domain of intestinal surgery may be said to be, in this country at least, almost unique. While possessing, therefore, so much that necessarily conduces to a perfect practical knowledge of the subject, he combines with that attribute the happy faculty of being able to express in language, both terse and clear, the results and teaching of his great experience.

It need hardly be said that the duty of a reviewer becomes peculiarly pleasing and profitable when it concerns the work of such an author as above depicted. One is tempted to read with intent to learn, rather than with any desire to criticise; for when it does happen that some particular teaching or practice seems not to run quite in prescribed and conventional lines, whatever doubt remains in the mind is almost outweighed by the prominence and position of the writer. If, then, it may be said that faults, should they exist, are not to be sought for, the duty becomes the greater to show that the worth of the book is such as to merit the high praise accorded it.

In the first place, it may be remarked that those who are familiar with the original work will find but little resemblance between it and the present book. Not only have the rich gleanings of fifteen years' ripe experience found their way into every department of the subject, but the whole has been rewritten, and the entire arrangement of the work altered. Thus, while it is described as a "new and revised edition," it is for all practical intents and purposes a new work. Although the opinions and practices of the author are stamped on almost every page, there is a liberal regard for the work of others, and numerous references will be found to workers in the same field. In a subject so difficult and complicated, so vast and so varied, this extension into fields wider than those embraced by the author's own personal experience serves to give a completeness and teaching value to the book which it could hardly otherwise have possessed.

The work is treated under three parts. Part I deals with Pathology and Morbid Anatomy; Part II with the Clinical Manifestations; and Part III with Treatment. The scheme is not very rigidly adhered to, as there is a good deal of intermingling of Parts I and II. The student, therefore, who takes up the book to read it from beginning to end, will find a considerable amount of repetition. This, on the one hand, has necessarily led to a volume of greater bulk than might otherwise have been; but, on the other hand, for a work which is essentially more fitted for reference on some of the special points with which it deals, such amplification or reduplication of the text may be said to be advantageous rather than otherwise, for it gives an instructive completeness to the discussion of a particular disease which would be lacking without it.

The practitioner will turn with greatest interest to the third part of the book, that portion which discusses the treatment of those conditions the pathology and symptoms of which have been exhaustively dealt with in Parts I and II. Here his expectation for useful and valuable information will not be disappointed, for it may be said to contain the very essence and practical outcome of the author's extensive experience in the treatment of intestinal obstruction in all its varied and numerous phases. He will be encouraged to find how increasingly successful has been the treatment of acute obstruction, within recent years, by early operative intervention. He will also be taught, in terms none too strongly expressed, that to temporise by the use of therapeutical or mechanical measures, when indubitable evidence of acute obstruction exists, is to commit an error so serious that ignorance can only excuse what is otherwise culpable neglect. To deprive a patient of the valuable resource of operation is, in the vast majority of cases, to deprive him of the only chance of life. This section of the book is particularly well arranged for practical instruction. The first chapter considers the general treatment of intestinal obstruction, whatever may be the real nature of the cause. Not the least interesting item considered is that regarding the administration of opium. The following two rules are laid down:—(1) Morphia must be given to relieve the pain; (2) the least amount which will effect the end should be the amount given. It must be confessed that Mr. Treves hardly makes it sufficiently clear to the reader who turns to consult exclusively this particular section, that the treatment by opium is not meant as a substitute for an operation when once the condition of acute obstruction is clearly manifested, or as a measure which is to admit of delay in operative intervention. It is quite sufficiently made clear in other parts that operation is the sole remedial measure required, and the employment of opium, therefore, is purely an interim means till the more radical treatment can be executed. The form of administration preferred is that of the tabloid; and the addition of atropine, so commonly used in combination with morphia, is condemned on the ground that it increases the thirst and dryness of the fauces.

The author condemns in no measured terms the employment of "massage of the abdomen" and "abdominal taxis." "These extreme and blindly applied measures of treatment belong to the dark ages, and in efficacy and reason must rank little above the 'faith cure' of the modern miracle worker and the incantations of the Indian medicine man."

Following the first chapter comes a very practical one on the subject of operative treatment. The various steps of procedure are fully gone into, and considerable importance is attached to the proper evacuation of the distended bowel above the seat of obstruction—"These contents are utterly noxious, and the bowel must be freed from them." "If in any advanced case the surgeon fails to evacuate the distended small intestine, he has distinctly failed to complete his operation." So far as can be gathered, Mr. Treves accomplishes the evacuation of the bowel by performing a temporary enterostomy, the bowel orifice being closed at a subsequent operation. It is, however, within the writer's own practical experience, that this evacuation of the bowel of its noxious contents may be quite safely and successfully accomplished at the time of the operation by gently squeezing out the fluid fæces through the "evacuatory incision," and then closing the artificial opening by immediate suture. In late cases, undoubtedly, the less severe and more rapid method of establishing an enterostomy will be preferable; but when a few minutes longer can be permitted, there is nothing in the manipulation of the bowel itself which can be said to weigh against the greater advantages attained in not having to perform a second operation.

Chapter III deals with the operative treatment of particular forms of acute intestinal obstruction, and the remaining three chapters with chronic intestinal obstruction.

Much might be said in further commendation of this useful and valuable book. That it is the foremost work of its kind in the English language goes without saying, and that it will still further add to the renown of its distinguished author is equally certain. Our best wishes for the success of the book are expressed in the hope that it should have a very widespread circulation in the profession. For its teaching is such that were it accepted and acted upon by every practitioner, that terrible and hopeless cry of "too late," so commonly heard at present in our wards and operating theatres, would be a wail of the past.

The Pathology of Emotions. By CH. FÉRÉ. Translated by ROBERT PARK, M.D. London: The University Press, Limited. 1899.

THE object which the author of this book has in view is the demonstration of the identity of the physiological conditions of states of consciousness of central or cerebral origin (the emotions), and those of states of consciousness of peripheral origin (sensation). The physical agents which modify sensation are equally capable of modifying the states of consciousness, which are of central origin. The external signs of these two states are to be investigated by the same methods. Psychology is only physiology specialised, mental medicine only a specialisation of general medicine. The physiological conditions which are a necessary accompaniment of the emotions, in no way differ from the reactions of external stimuli; external excitation and representations of external excitation determine the same reactions; the absence of normal physical excitants is accompanied by the same depression of the animal functions as the absence of mental excitation; and it is upon this similarity that the study of the emotions is based.

The opening chapters deal with the physiological and pathological effects of physical agents (light, temperature, the hygrometric state, &c.), upon the physical and psychical constitution, and here, we think, M. Féré might with advantage have touched upon those modifications of life which result, always and universally, from those variations of temperature, light, hygrometric and other conditions which constitute the seasons. The effects of these variations upon human life are very evident, and the lessons to be learned from them most instructive. The general impression conveyed by M. Féré's account is that cold is an agent which acts deleteriously upon the human organism. If extreme, no doubt it does, but if not so, its action would seem to be rather advantageous, and to tend to the raising of vitality to a higher level. In summer, the endurance of fatigue and resistance to adverse circumstances are reduced to their minimum, while the converse holds in the winter. The summer is always characterised by a relatively high rate of suicide, insanity in all its forms, procreation, and the impulsive or passional forms of crime, and it is only on this theory of lowered vitality during this season that we can see any feasible explanation for this unvarying association of these phases of human conduct with the advent of the summer season. As an illustration of the effect of environment upon the human organism it is peculiarly striking, and we regret that it has found no place in M. Féré's work.

The chapter dealing with the curative effects of the emotions is one which strikes us as likely to appeal to that class which goes by the designation of "faith healers." "The agreeable emotions, or in general a happy temperament, can have a good influence upon the evolutions of all maladies." This is the universal experience of all physicians, but experience shows that when this method of treatment is relied upon to the exclusion of all other, the results are often enough disastrous, and what amount of credence is to be attached to the statement that parasitic affections of the skin, and especially itch, can be cured under the influence of violent emotions?

In Chapter IX, which treats of the physical signs of the psychopathies, the association with the disorders of the mind, independently of the form which they assume, whether depression or exaltation, of a bodily condition whose tendency is in general towards lowered vitality, is clearly brought out. "In all mental affections, nutrition is more or less altered, and this alteration is objectified by a lowering of temperature observable in all forms." Essentially, there is no difference between mania and melancholia. "Regarded from the somatic point of view, the maniac differs only superficially from the melancholic." Mania may seem to be characterised by an exaltation of the intellectual faculties, but this is only apparent, not real.

There is much that should be of interest to all those who concern themselves with the question of social reform in the chapter dealing with the prophylaxis of morbid emotionalism. There can be no doubt that the most powerful factors in the causation of insanity and other perversions of the mental faculties short of insanity and of criminality is to be found in some inherited, innate, constitution of mind, and the influences which are brought to bear upon the mind in the earlier years of life when the character is being moulded. If any real general amelioration is to be brought about, it must be, not so much by attempting to reform the mental constitution of those who are declared lunatics or are recognised criminals, but by real preventive methods. If "prisons are no remedy for crime," so also may it be said that asylums, a sadly necessary and very unremunerative evil, are no real remedy for insanity. Some of the directions in which improvement may be looked for are set forth by M. Féré, but the difficulty lies in the practical application of the remedies. "The hygiene of our sexual relationships," for example, how in the present state of social sentiment is that to be dealt with, and by what manner of means is the "happy choice of progenitors" to be assured?

If there is anyone more fitted than another to speak authoritatively on the subject of morbid emotionalism it is M. Féré, with his long experience and painstaking and well-reasoned observation of mental and nervous diseases, and his varied and wide knowledge of biological laws. We have only briefly touched upon some of the points of his book, and we think it is a work which should be helpful to a certain class of readers, but the hope of the translator that "it will serve the purpose of enlightenment to the vast thinking and reading public who are unable to obtain the knowledge at first hand," is not, we think, likely to be realised. The devotion of his leisure to such a work is to the translator's credit, but the translation itself is quite otherwise. There is evidence throughout the book that he has been, to say the least, neither careful nor painstaking, and the result is very poor English indeed. This arises chiefly from a too slavish adherence to the original, but not altogether, for in many places the language conveys little or no meaning, while the coining of new words and the mis-spellings are simply endless. In his own preface there is one sentence, the meaning which we cannot grasp. "I trust it will serve the purpose of enlightenment to the vast thinking and reading public who are unable to obtain the knowledge at first hand: and that it will ultimately fructify in improved legislative and educational methods. *It is quite impossible, either can ever be, even approximately, perfect or admirable, so long as the minds of men are over-ridden, or even over-shadowed, by the ideas emerging from a metaphysical or supernaturalistic philosophy.*" The transposition of the subject and object in a sentence is exemplified in: "This mode of understanding things can oppose spiritualists" (p. 137). "Ogier Ward has observed purpura after fear: in one of his cases *emotion had immediately followed an epistaxis*" (p. 224). "They are not only the tender or sad affections *which show the woman in grand array*" (p. 430). Such words as du pourquoi, reverbere, tirage, entourage, imberbe, toquade, bizarreries, menage, merlan, solidaire, anses, and numberless others should not appear in a book intended for those "who are unable to obtain the information at first hand." The word "access" is used throughout when it means in reality a fit, seizure, attack, or paroxysm. The usual licence is permitted to Mr. Anthony Hope, when he says:—

> "The true progressive, pale and Jaegar-clad,
> Would lift us upward to his latest fad.
> Our streets he raises, raises too our rates,
> And *worsens* by his *betterment* the bad."

In a book of this sort, however, the use of such words as worsened, betterment, bettered, and betterness is hardly justifiable, and the same may be said of icery, ennuyed or ennuied, inirritation, dispeace, puerperality, adaptation, catalepsised. We have been unable to find "pintles" in any dictionary, and not a few readers will, we fancy, be puzzled to know what "rhone" is, or what the meaning is of such phrases as "the left gray is of a darker brown," "a demicrown of fortification à la vauban," "decubital numbing," "reptation of the tongue," "hallucinations of the masseter," "the Junod's boot," "chromatic asymetry of the sides," "they (*i.e.*, the sthenic emotions) have a happy action equally well on the evolution of *spots*," "state of epilepsy mal," the "rotary" or "rotation" reflex. For a time we were puzzled to know in what way the patient, mentioned on page 406, had utilised for his personal benefit a certain number of *timber posts*, and then it dawned upon us that what we had to deal with was just another illustration of the very literal translation of the original. The appropriation and restitution of *postage stamps* is easy to understand. In the contemplated future edition there is something more important and desirable than the completion of the references in foot-notes.

The Murmurs of Mitral Disease. By EDWARD MANSFIELD BROCKBANK, M.D., M.R.C.P. With Five Illustrations. Edinburgh and London: Young J. Pentland. 1899.

WE have read this little book with some care, and notwithstanding, unlike the author, we have not joined the smaller band of unbelievers, but have remained in the orthodoxy in which we have been brought up. It matters, we think, very little whether or not we regard the murmur as early systolic —we don't think it is—or arrested systolic, so long as we know that far and away the most frequent sign of mitral stenosis is the so-called presystolic murmur. Certainly the orthodox position is the simplest position—the heterodox one so complex that an attempt to understand it induces a headache in a man of average intelligence. The author has expended much labour to prove his theory, and for this we must give him credit; at the same time we must say that he has quite failed to convince us. It seems to us that his method of settling the question is altogether wrong. The precise origin of the A.S. murmur, as we prefer to designate it, will never be determined by blowing through pieces of indiarubber, or auscultating Higginson's syringes arranged in special ways and worked under water. It seems to us that all this, though very interesting and amusing, has but little bearing upon the causation of the presystolic murmur. The only true way to arrive at a solution of this question, is to record carefully the phenomena during life, and whenever possible to compare the records with the phenomena observed after death. No doubt such a method takes time, and the Higginson syringe method may be worked off rapidly; but then, consider the difference in the results—in the one certainty, in the other confusion of thought and theory against theory. But of course if this method were to be adopted it would take a lifetime, and so does not commend itself to enthusiastic investigators. It is asked, How can the thin-walled auricle produce the harsh crescendo murmur? The author argues it is not always, if it is ever, strong enough to contract with that vigour which is necessary for the development of the murmur. Now we assert that this is not a matter for argument, but for observation in the *post-mortem* room. The less argument the better—we have had a great deal too much of it in this paper. We have examined the auricular wall in many cases of mitral stenosis, and have rarely found it not thickened, even when dilatation was considerable. As a matter of personal observation, we have no difficulty about the wall of the auricle. We look in vain for the heretic's own observations on the wall of the auricle, and find instead references to Sansom and others. Then, again, it was our experience that in all uncomplicated and simple cases of mitral stenosis, atrophy and not hypertrophy or dilatation of the left ventricle was the rule—an atrophy so great as to contrast most strikingly with the hypertrophied left auricle and right ventricle—and yet we are asked to believe, on the authority of a Higginson's syringe, that this small left ventricle, with its thin walls, is more likely to supply the force than the hypertrophied structures behind the seat of obstruction. There is not a single appeal to the *post-mortem* room in the whole book, except the criticism of Gairdner's case of tricuspid obstruction, which is about as inconclusive a piece of writing as we have read for a long time, especially when we consider that the author of it had never seen the specimen in question. One page of observations, such as Gairdner's, is worth, in our opinion, volumes of the kind of theoretical speculations contained in this book.

On the Relation of the Nervous System to Disease and Disorder in the Viscera. Being the Morison Lectures delivered before the Royal College of Physicians in Edinburgh in 1897 and 1898. By ALEXANDER MORISON, M.D. Edin. Edinburgh and London: Young J. Pentland. 1899.

ALTHOUGH these lectures have already appeared in the *Edinburgh Medical Journal*, and, in abstract, in the *Lancet*, a few remarks may be made upon them as they now appear reprinted in a single volume. Lecture I treats of histological methods, and of the innervation of secretion, involuntary muscle and excretion. The subjects of consideration in Lecture II include the relation of ganglion-cells to each other and to fibres; the sympathetic system, and certain other nerves such as the vagus. Lecture III is on the physiology and Lecture IV on the pathology of visceral innervation. Under the latter heading allusion is made to visceral neuritis, the state of the nerves of hypertrophied organs such as the uterus and the heart, the etiology of labour, &c. Lecture V is on disorders of visceral sensibility such as angina pectoris and uterine pain. Other points treated of or alluded to are: cardiac ganglia, innervation of intracranial vessels, absence of pain in disease of the viscera, tortuosity of cardiac nerves, and mental effects of visceral disease. Lecture VI occupies two chapters, of which the first is concerned with disorders of visceral motion, and the second with body and mind. An appendix is devoted to a further consideration of the innervation of intracranial blood-vessels.

The work is well written, and is of interest as embodying some original investigations by the author. There are nearly forty illustrations, but some of these are scarcely such as to carry conviction. It has been the fashion in recent years to reproduce photographs as illustrations for scientific books, and this tendency has probably been fostered by the consideration that a photograph is a guarantee of strict truthfulness to nature. But such illustrations are very often greatly inferior to a good drawing for the purpose of conveying the author's meaning, and, moreover, a photograph is not beyond the reach of the artist's skill. Other illustrations in the present volume are of an excellent order, and altogether the author is to be congratulated on the diligence with which he has worked at a very intricate subject.

The Medical Complications, Accidents, and Sequelæ of Typhoid or Enteric Fever. By HOBART AMORY HARE, M.D., B.Sc. With a Special Chapter on the Mental Disturbances following Typhoid Fever by F. X. DERCUM, M.D. London: Henry Kimpton. 1899.

FOLLOWING, as it does, so closely on Keen's essay on the *Surgical Complications and Sequelæ of Typhoid Fever*, Professor Hare's monograph will be received with a hearty welcome by those who take a special interest in this most interesting disease. The ailment reminds us of the game of whist, such an endless variety of aspects does it present to the attentive physician. This cannot blind us, however, to the fact that enteric fever is a preventible disease, a disease that is an accident in the life of the individual, and in no way an essential part of the heritage which nature has bestowed upon humanity; a filth-disease, moreover; a disease that is not only a scourge, but a disgrace to civilised man. We may note with satisfaction Professor Hare's remark that its frequency, severity and mortality are steadily decreasing all over the world, but we cannot justly be satisfied until it is abolished altogether.

Chapter I of the present volume is occupied with general considerations, such as the frequency and mortality of enteric, its occurrence in children and in old people, and its relation to pregnancy. Chapter II is on varieties of onset; Chapter III on the aberrant symptoms, states, or complications of the well-developed stage of the disease; and Chapter IV on the complications of the period of convalescence. Chapter V is a short one, which treats of conditions which ape typhoid fever —malarial fever, tuberculosis, septic infection, &c. Chapter VI is on duration and immunity to second attacks. The seventh and last chapter is contributed by Professor Dercum, who furnishes us with an account of the mental complications of enteric, namely, those that develop during the prodromal or initial period of the fever, those that arise during its course, and those that occur during or after convalescence.

While Professor Hare draws freely upon his own experience, the value of such a monograph as this manifestly depends upon its being a compilation founded upon the whole range of medical literature so far as its appeals to the physician rather than to the surgeon; and so far as we have been able to judge, the author has done justice to his subject. The nature of the work adapts it more for reference than for immediate study and digestion, but to say this is to appreciate its value in days when one is overwhelmed by a flood of worthless writings on something that is for the moment a subject of fashionable discussion.

Practical Nursing. By ISLA STEWART and HERBERT E. CUFF, M.D. In Two Volumes. Vol. I. Edinburgh and London: William Blackwood & Sons. 1899.

WE like the plan of this work. The first volume now before us is devoted to nursing from the general point of view; the second will deal with special branches of nursing. The introductory chapter on nursing as a profession is interesting. With most of the statements in it we agree, but we still think that nurses are born—not made. Nothing astonishes us more than the numbers of women who aspire to be nurses. What happens to them all, we do not know. Of this we are convinced—that if ever a "call" to work is necessary, before that work is engaged in a "call" is necessary for the woman who is to be a nurse. And the "call" should be disregarded if it is found that Nature has not endowed the aspirant with those qualities which go to make a good nurse. Education and training of themselves will never make a good nurse; indeed, the examination test will only admit a number of women who are unfit, and will certainly exclude very many of the "born" nurses whom now it is the fashion to decry. By all means let us have training, and good training, but do not let us select our nurses on the basis of an examination which can certainly not be depended upon "to sweep out of a grand profession the half-trained women," and which often does keep out women who would be an honour and a glory to its ranks. We are not sure how we are to take the word "grand" as applied to the profession of nursing. If we mean a life of unselfish, self-sacrificing devotion, which counts not the cost, and is willing to lay down life itself that the sick may be succoured, then certainly no grander profession ever existed. But is this the ideal of the modern nurse as a rule? We trow not. It is with very many a matter of bread and butter, and with this we have no fault to find. If people wish to make their living in this way, and to enjoy the doubtful distinction which a uniform imparts, then by all means let them go in for the work. But let us stop the use of phrases like "grand profession," and deal with the subject as one of the facts of everyday life. Nurses are neither more nor less, as a rule, than ordinary women, for the most part upright, honourable, and devoted, but not more so than other women who have their livings to make. In this regard we have to say that the profession of nursing is about the poorest that a woman could adopt; the prizes are few, and the prospects (if we exclude matrimony) *nil.* All honour, then, to the women who determine to make their bread in this way.

As regards the contents of the book, they are such as may be found in any good nursing manual.

The Pathologist's Handbook: a Manual for the Post-mortem Room. By T. N. KELYNACK, M.D. With 126 Illustrations. London: J. & A. Churchill. 1899.

THIS little volume will prove most serviceable to the student as a guide to the manner of performing *post-mortem* examinations. The directions are clear and concise, and every detail of a *post-mortem* examination is thoroughly dealt with. A very special feature of this little book is the large number of illustrations which it contains, and which cannot fail very greatly to enhance its value. The book is bound in pergamoid so that the cover may be washed. To all students of pathology, and to all house-surgeons and house-physicians who are called upon to perform *post-mortem* examinations, we very heartily recommend it.

Some Aspects of the Mental Discipline associated with the Study of Medicine. An Address delivered to the Queen Margaret College Medical Club. By C. O. HAWTHORNE, M.B. London: J. & A. Churchill. 1899.

WE are pleased to have Dr. Hawthorne's address in this form. It is a vigorous, robust piece of writing, full of commonsense from beginning to end. In every sentence we recognise the intensity of thought which was the characteristic of the man who was once our colleague in the Glasgow school, and who now so worthily sustains its reputation in the great field of London. One cannot read the address without feeling that the man is in his work, and is loyal, in the highest sense of the term, to the profession to which he has given his life. A great part of his address is written to prove that medicine provides an education in the appreciation of evidence or testimony. The nature of opinion is then discussed, and, finally, the art of prognosis is referred to in a few thoughtful paragraphs. We have enjoyed reading the pamphlet much, and advise all the author's old students to get it and read it for themselves.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

PATHOLOGY.

Scrofulous Lymphadenitis. By F. C. Moore (*Journal of Pathology and Bacteriology*, vol. vi, part i).—The material for this research was obtained from glands excised from the human subject—eighteen cervical and two axillary cases. The glands after excision were washed in cold water, dried with sterilised filter paper, and wrapped in same for conveyance to the laboratory. A broad track of capsule was seared with red-hot spatula, and gland cut into through sterilised track. Small fragments were snipped from cut surface. In some cases juice was expressed from a large piece of gland tissue, and measured on to sterilised filter paper. In others, the inoculation material (sputum) after emulsification with alkaline peptone-bouillon and filtration through glass-wool, was treated like gland-juice or inoculated by syringe. The gland-fragments or the charged filter paper were then placed in a subcutaneous pocket below level of knee in rabbits and guinea-pigs. The glands used were examined microscopically with regard to both histology and bacteriology. They were divided into two types—according to occurrence or not of retrograde changes. In latter type, progressive new formation of epithelioid-celled tissue gradually replaces the normal lymphadenoid tissue. The new tissue has little or no tendency to caseous degeneration, while frequently the original connective tissue of the gland is the seat of hyaline change. Specific changes are confined to parenchyma, and do not tend to affect periglandular tissues. In one case of this type the occurrence of laminated concretions is noted, the majority occupying giant cells in their intranuclear zone; demonstrable tubercle bacilli rare. In *type characterised by retrograde change*, caseous degeneration is marked in large areas; duration longer than in first type. The morbid process tends to involve surrounding tissues. Demonstrable tubercle bacilli are more common, especially in glands in which necrosed tissue has undergone softening. A class presenting intermediate characters also exists.

Histogenesis: Initial Stage.—Proliferation in centre of follicle and in certain of lymph-sinuses; occasionally hyaline degeneration of capillary vessels and swelling of lymphadenoid reticulum. The *tubercle* probably originates in cells around or composing the walls of the afferent capillary where latter enters follicle, and the proliferating cells of centre possibly take some part, not initiative, in formation. If irritant be of sufficient intensity, retrograde changes take place. Typical giant cells precede retrograde changes, and are common in the second type.

Experiments were conducted on rabbits and guinea-pigs. Inoculation with gland-fragments produced progressive tuberculosis in guinea-pigs and in rabbits a subcutaneous nodule. This tuberculosis induced in guinea-pigs is, as a rule, slow in evolution and slight in degree as compared with that following inoculation of virulent cultures. In the less susceptible rabbit, feeble infectivity of scrofulous glands is more marked, and this is borne out by comparison with results of inoculation with tuberculous sputum and with lung-nodules, in which the animal became extensively infected. From the above, Moore maintains that scrofulous gland virus is weaker than that in pulmonary phthisis. From further experiments, he concludes that by passing the scrofulous gland virus through susceptible animals its virulence may become considerably augmented.

Pathogenesis.—"Infection presumably consequence of some perversion of the protective functions of the pharyngeal lymphadenoid tissues." The phagocytes with ingested bacilli succumb at the first lymph gland, and the bacilli then act on gland tissues. The comparatively feeble virulence of bacilli in scrofulous glands cannot be regarded as a measure of the virulence of initiating virus, nor can scrofulous lymphadenitis be held to result from fewness of the infecting bacilli.

The relative benignity of scrofulous lesions is to be correlated with a degree of resistance considerably above the normal. This, while present in the lymphatic glands, is not found in the tissues at port of entrance. Absence of local lesion (at seat of inoculation) is a direct indication of relatively low tissue-resistance. Tonsillar tuberculosis is by no means invariably followed by lymphatic tuberculosis, and this may be explained by the view that the reaction of the tonsils to the virus shows relatively great tissue-resistance in these organs. Although actual tubercular lesions are rare in drainage areas of scrofulous glands, other conditions are more or less constantly present there—recurrent subacute inflammation or actual hyperplasia. Susceptibility to irritation may be hereditary, or acquired in unfavourable hygienic conditions; also acquired in cases of extensive dental caries. Lymph from a drainage area so altered irritates correlated glands; this results in increased functional activity, and this again is followed by increased resistance, best marked in glands farthest removed from the source of irritation. If disease reaches down the chain towards the *normal* glands, it manifests a more acute course, dependent on absence of increased resistance in those glands.—G. H. E.

The Toxicity of Normal Urine. By W. P. Herringham (*Journal of Pathology and Bacteriology*, vol. vi, part ii).—The author experimented on rabbits. No anæsthetic was used. The urine to be injected is filtered clear and neutralised. Generally injected at room temperature into large auricular vein. The fine syringe needle is connected with a burette by tubing, and a steady flow (10 c.cm. per minute) maintained by a hand air-pump. Injection causes contraction of pupils, drowsiness, muscular twitching in neck; often the bowels act, sometimes loosely, and a little urine (up to 30 c.c.) passed. Respiration, with or without previous acceleration, gradually falls in rate. Embarrassed expiration ensues, and rate of respiration falls till death. Difficulty in breathing is accompanied by restlessness, then convulsions, and generally death in first fit. The author found that no other factor than *potassium* varied in harmony with the toxicity. The addition in quantity of pigments to normal urine did not increase its toxic value. There is no necessary connection between urine-injection and uræmia, although the same symptoms are found in both conditions.—G. H. E.

Books, Pamphlets, &c., Received.

The Guide to South Africa, for the use of Tourists, Sportsmen, Invalids, and Settlers. With Coloured Maps, Plans, and Diagrams. Seventh Edition. London: Sampson Low, Marston & Co., Ltd. 1899.

South African Health Resorts: The Voyage to South Africa and Sojourn there. London: Donald Currie & Co. 1899.

Practical Nursing, by Isla Stewart and Herbert E. Cuff, M.D., F.R.C.S. In Two Vols.—Vol. I. Edinburgh: William Blackwood & Sons. 1899. (3s. 6d. net.)

The Medical School Calendar and Guide to Students for Scotland. 1899-1900. Edinburgh: E. & S. Livingstone. (2s.)

Contribution à l'étude des Obsessions et des Impulsions à l'Homicide et au Suicide chez les dégénérés, au point du view médico-legal, par le Docteur Georges Carrier. Paris: Aux Bureaux du Progrès Médical. 1899. (3 frs.)

Contribution à l'étude du Pronostic de l'Épilepsie chez les Enfants, par le Docteur G. le Duigou. Paris: Aux Bureaux du Progrès Médical. 1899. (2 fr. 50 c.)

A Manual of Modern Gastric Methods (Chemical, Physical, and Therapeutical), by A. Lockhart Gillespie, M.D.; with a Chapter upon the Mechanical Methods used in Young Children, by John Thomson, M.D. Edinburgh: Oliver & Boyd. 1899. (5s.)

The Johns Hopkins Hospital Reports. Vol. VIII: On the Rôle of Insects, Arachnids, and Myriopods, as carriers in the spread of Bacterial and Parasitic Diseases of Man and Animals, by George H. F. Nuttall, M.D., Ph.D. Baltimore: The Johns Hopkins Press. 1899.

Cancer: Illustrated by One Thousand Cases from the Registers of the Middlesex Hospital, and by Fifty Selected Cases of Cancer of the Breast, &c., &c., by Thomas William Nunn, F.R.C.S. London: Henry J. Glaisher. 1899. (2s. net.)

Catechism Series. Materia Medica, Part I, Revised in accordance with the British Pharmacopœia, 1898. Edinburgh: E. & S. Livingstone. (1s. net.)

An Introduction to Diseases of the Nervous System, by H. Campbell Thomson, M.D., M.R.C.P. London: Baillière, Tindall & Cox. 1899. (4s.)

A Manual of Surgery for Students and Practitioners, by William Rose, M.B., B.S., F.R.C.S., and Albert Carless, M.S., F.R.C.S. Second Edition. London: Baillière, Tindall & Cox. 1899. (21s.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 21st OCTOBER, 1899.

	Week ending			
	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.
Mean temperature, . .	48·3°	48·5°	49·7°	49·7°
Mean range of temperature between day and night, .	14·8°	14·0°	13·6°	20·4°
Number of days on which rain fell, ...	7	4	3	0
Amount of rainfall, . ins.	1·66	0·63	0·49	0·00
Deaths registered, . . .	261	248	273	266
Death-rates, ...	18·5	17·6	19·3	18·8
Zymotic death-rates, . .	4·0	4·0	2·8	3·0
Pulmonary death-rates, .	3·9	3·0	5·0	4·7
Deaths—				
Under 1 year, . . .	71	68	58	67
60 years and upwards, .	56	48	63	46
Deaths from—				
Small-pox, ...	...	...	...	...
Measles, ...	2	9	14	12
Scarlet fever, . . .	4	5	1	4
Diphtheria, . . .	1	4	2	2
Whooping-cough, . .	3	2	2	2
Fever, ...	6	10	5	7
Diarrhœa, ...	40	27	15	16
Croup and laryngitis, .	1	2	...	1
Bronchitis, pneumonia, and pleurisy, . . .	36	29	53	47
Cases reported—				
Small-pox, ...	...	...	...	...
Diphtheria and membranous croup, ...	8	11	9	5
Erysipelas, . . .	31	27	27	24
Scarlet fever, . . .	151	132	163	149
Typhus fever, . . .	...	...	...	...
Enteric fever, . . .	56	30	19	22
Continued fever, . .	...	1	2	2
Puerperal fever, . .	...	2	1	2
Measles,* . . .	93	136	174	160

* Measles is not notifiable.

Sanitary Department,
Glasgow, *26th October, 1899.*

THE

GLASGOW MEDICAL JOURNAL.

No. VI. December, 1899.

ORIGINAL ARTICLES.

POST-EPILEPTIC HEMIPLEGIA OF SHORT DURATION.

By WM. GIBB DUN, M.D.,
Assistant Physician, Western Infirmary.

Well-marked hemiplegia, lasting for hours, or days, and coming on after a pronounced epileptic fit, is not of uncommon occurrence, and was described by Todd in his *Clinical Lectures*, in 1854, as "epileptic hemiplegia." He narrates several cases, in all of which the epileptic seizures were of the more severe type, and the paralysis well marked and of some duration, except in one instance where it disappeared in from fifteen to twenty minutes.

Todd summarises his description of epileptic hemiplegia thus:—"A patient has a fit, distinctly of the epileptic kind; he comes out of it paralysed in one half of the body; generally that side is paralysed which has been more convulsed than the other, or which has been alone convulsed; but the paralysis may occur where both sides have been convulsed equally. The paralytic state remains for a longer or shorter time, varying, perhaps, from a few minutes, or a few hours, to three or four days, or even much longer. It goes off, or improves, until the next epileptic fit, when a train of phenomena, precisely similar, recurs with like result."

Epileptic seizures which are followed by paralysis may, however, be of the slightest kind, "especially," as Gowers observes, "those in which the first (and sometimes the sole) discharge is sensory."[1]

Recently a case came under my observation in which the symptoms of "fit" were so slight as almost to escape observation. The case seems to me worthy of record, particularly because of the extreme brevity of the paralysis, lasting only for a few minutes, and occurring in a person apparently the subject of epileptic symptoms of the very slightest description.

The patient was a healthy-looking man of about 40 years. While seated at breakfast one morning, in the act of taking porridge, his wife noticed that he let fall the cup of milk which he was holding with his left hand. She filled the cup again, and again he let it fall. It was then noticed that his left cheek was much twisted, and he was unable to articulate. He was assisted to another room, not being able to walk alone. Evidently there was paralysis of the left arm and leg, of the face (on the right side), and of the tongue. No sooner had he been removed to the room than he said, "I am better," while only a few minutes before he could not utter an articulate sound. The paralysis of the arm, leg, and face had also disappeared, and about half an hour after he left for his work. When I saw him in the evening he complained only of headache, and there were no symptoms whatever of paralysis. The urine, when examined, was found to be non-albuminous. I learned from him that for some months he had been subject to momentary attacks of giddiness, but had never fallen or lost consciousness. The attacks of giddiness recurred at intervals of about a month. There was no aura. I take it that these attacks were epileptic, and to be classed as *petit mal.*

It is of great importance that the true nature of transient attacks of hemiplegia, such as I have described, should be rightly recognised, both that proper treatment may be adopted, and also that patients and friends may not be alarmed by the erroneous diagnosis of serious cerebral disease.

---

[1] Gowers, *Diseases of the Nervous System*, vol. ii, p. 92.

SARCOMA OVARII.[1]

By ALEXANDER ROXBURGH, M.B., C.M.

I propose to describe in detail three cases of ovarian sarcoma which have been under my observation within the last three years; and, in addition, a hitherto unpublished case which Dr. Finlayson—to whom I am indebted for the report—had under his care in the Royal Hospital for Sick Children in 1888. I shall, in the second place, endeavour to point out how far the facts of these cases are in harmony with, or, it may be, supplement what at present is known of the disease in question—an inquiry greatly facilitated by the investigations of Pick,[2] Témesvary, Pfannenstiel,[3] Gebhardt,[4] and others, and, in itself not without value when one considers the astonishingly meagre descriptions which still obtain in English text-books. Besides, the comparative rarity of the affection, and the numerous unsolved problems attending it, justify the publication of every case in any way calculated to increase our knowledge of the disease.

I.

Case I.—I. L., æt. 28, nullipara, and unmarried, was admitted into the Victoria Infirmary, under the care of Dr. Napier, on 4th December, 1896. Her health had been very good till the end of April, 1896, when, without obvious cause, she began to experience *pain in the epigastrium* and *in the left shoulder*. The epigastric pain was greater after food, and gradually diminished as digestion proceeded. Soon after the middle of July (two and a half months after onset of illness) *vomiting* was added to the other symptoms, which already included a noticeable degree of *bodily weakness*, and continued to recur three or four times a week till the month of October, when it spontaneously ceased. No blood was ever vomited.

In the first week of November patient had a sudden attack of pain in the left side of the chest, and was told she had *pleurisy*. From that time her illness became more marked; she rapidly lost in flesh and colour, *diarrhœa* was frequent and profuse, the bowels moving nine or ten times daily.

---

[1] Thesis presented for the degree of M.D. of Glasgow University, July, 1899.

[2] Pick, *Centralblatt f. Gynäkologie*, 1894, No. 39.

[3] Pfannenstiel, *Veit's Handbuch*, Bd. iii, 401-599.

[4] Gebhardt, *Pathologische Anatomie*, p. 382.

Menstruation, notwithstanding these facts, was up to this time in all respects *normal,* and the first period to be missed was the one due a few days after patient's admission to the hospital.

A careful examination on 4th December revealed nothing beyond tenderness over the epigastrium and limited dulness at the base of the left lung, with feeble respiratory murmur without friction sounds. On the 10th December a distinct bulging of the lower part of the anterior surface of the thorax on the left side (Fig. 1, p. 388) was observed, and this area was dull to percussion, and the seat of pain. Doubts were entertained as to the nature of the swelling, but, although the patient had resided for some time in a malarial district, it was not supposed to be due to splenic enlargement. Examination of the blood showed the hæmoglobin to be reduced to 60 per cent. There were no tubercle bacilli in the sputum.

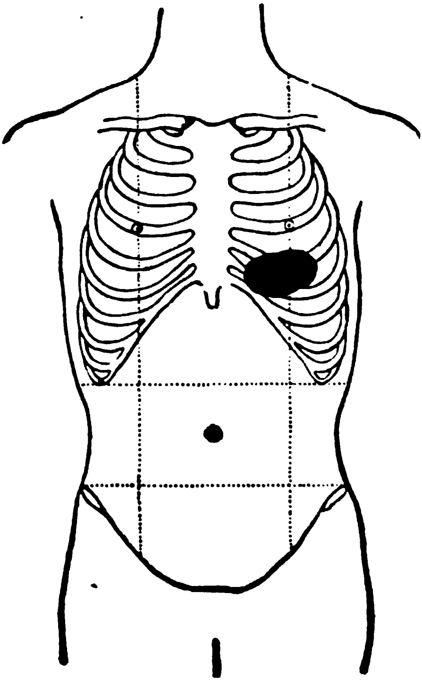


FIG. 1.

On 15th December an exploratory puncture was made. The needle seemed to enter a solid body, and nothing was obtained but a few drops of blood.

From 19th to 22nd December diarrhœa and epigastric pain were severe; on the 26th vomiting returned. The urine was acid and free from albumen.

On 7th January, 1897, some serum was withdrawn from the left pleura.

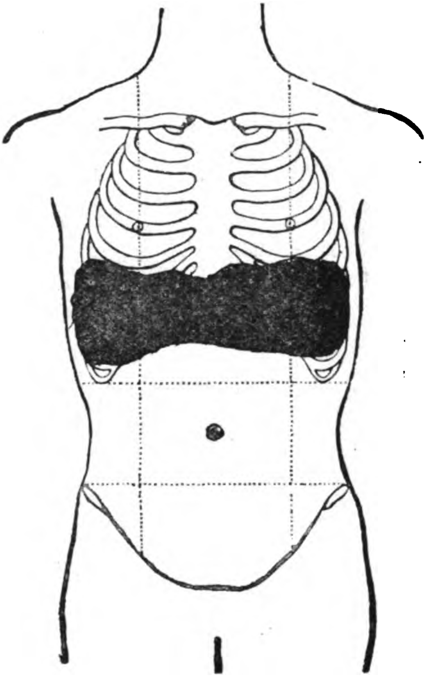


FIG. 2.

On the 9th the swelling was found to have increased in size (Fig. 2, p. 389), and, in addition, a hard mass was felt in the epigastrium immediately beneath the xiphoid cartilage, smooth, tender to pressure, and immobile. Several ounces of turbid serum were withdrawn from the left pleura.

An exploratory incision was made by Dr. Parry on 18th January in the middle line just beneath the sternum. The tumour which presented was found to be surrounded on all sides by dense adhesions, so that its limits could not be ascertained. The free surface was smooth, and traversed by numerous blood-vessels. A small incision lower down showed that the gall-bladder and right lobe of the liver were normal, and that the tumour occupied at least the greatly distended left lobe of the liver, and puncture proved it to be solid. There was no ascites. A small fragment of the mass was removed for examination, and the wounds were closed.

A week later patient sank rapidly, and died on 28th January.

Autopsy.—On opening the abdomen the above mass was seen to involve the left lobe of the liver, stomach, left kidney, and diaphragm, and penetrating the latter to invade the left lung. It was uniform in appearance and structure. There was a small nodule in the right kidney.

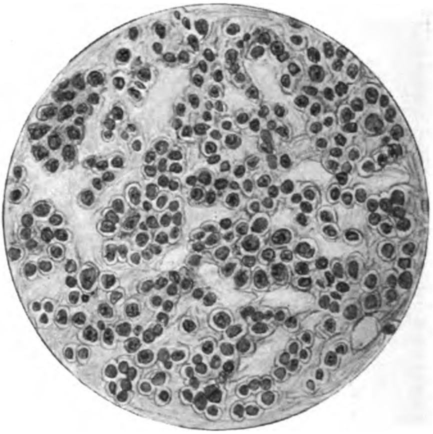


FIG. 3.
Section from liver.

The *left ovary* was enlarged and spherical, resembling a billiard ball, and was devoid of adhesions. The remaining pelvic organs, with the exception of a small fibroid in the fundus uteri, were normal.

Microscopic section of the ovary showed it to be completely transformed into a round-celled sarcoma, and the same change was apparent in the tissue removed from the liver (Fig. 3, p. 390) at the time of operation.

CASE II.—J. W., æt. 23, nullipara, and unmarried, was admitted to the Victoria Infirmary on 25th July, 1898, under the care of Dr. Napier, on account of swelling of the abdomen and pain in the loins.

Previous to the present illness, which began early in May, 1898, patient was in good health and able to attend to her work. She had been invalided for a short time in 1895 by an attack of left-sided pleurisy.

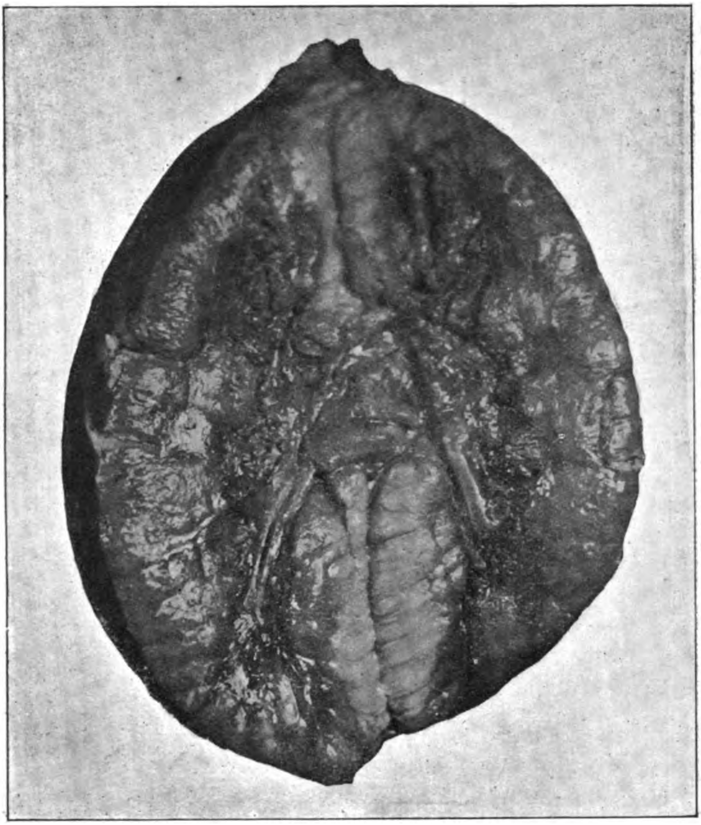


FIG. 4.

Kidney from Case II.

The first symptoms she complained of were *headache* and *pain in the epigastrium,* which came on immediately after taking food, and lasted for several hours. *Vomiting* occurred on two occasions; there was no blood in the ejecta.

About the middle of June patient had an attack of *left-sided pleurisy* which kept her in bed for two weeks, and when convalescent she noticed that the abdomen was very much swollen. From this time onward she suffered from respiratory difficulty. *Vomiting*, too, became frequent, recurring four or five times a day. There were frequent complaints of pain in both lumbar regions; profuse *diarrhœa* replaced the previous constipation; great bodily weakness followed exertion, and

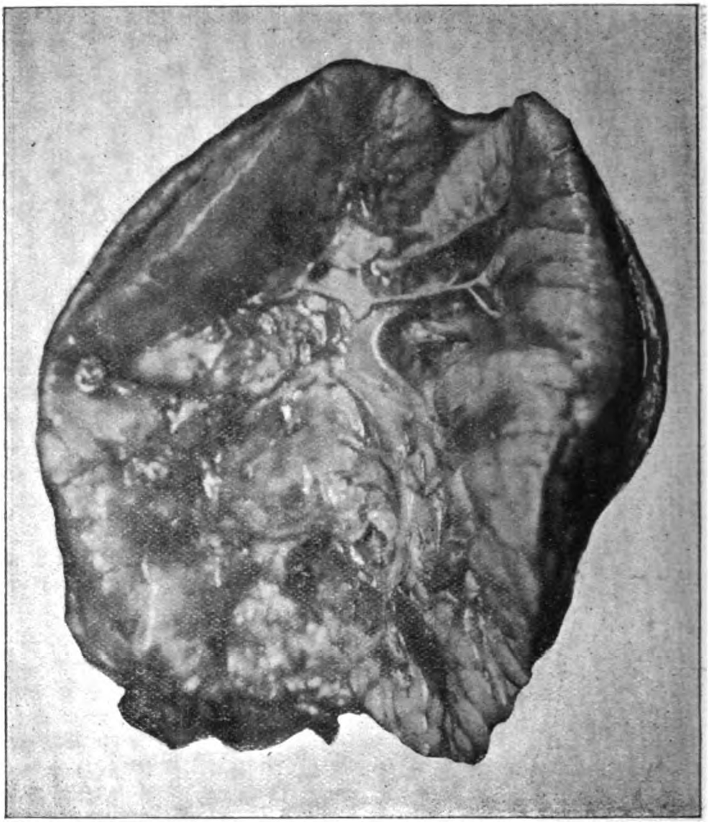


FIG. 5.

Kidney from Case II.

about a week before admission there was œdema of the feet and legs. Up to this time *menstruation* had been perfectly normal.

On admission to hospital the patient had all the appearances of a fairly well-nourished woman. Her pulse was good, but she had slight respiratory difficulty, and there was œdema of the lower eyelids, face, feet, and legs. The abdomen was uniformly enlarged, and had a tense feeling on deep palpation. All the signs of ascites were present.

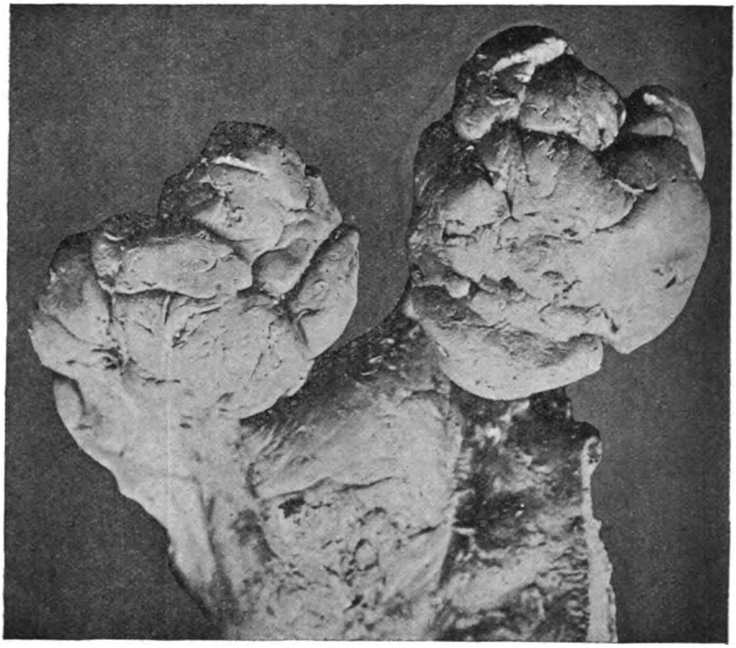


FIG. 6

Uterus and ovaries (Case II).

At the apex of each lung expiration seemed prolonged, and moist râles were heard. On the left side, from the seventh rib downwards, there was complete absence of respiratory murmur, vocal fremitus, and resonance. The heart was normal.

The upper part of the left mamma was occupied by a hard and irregular swelling, which the patient had first noticed two weeks earlier. It was adherent to the thoracic wall, especially at the left edge of the sternum.

The urine contained a slight trace of albumen.

On 29th July a large mass was felt on each side of the abdomen just above Poupart's ligament, both of them slightly movable, oval in shape, and tender to pressure. *Per rectum*, a large mass was felt, which seemed to occupy the whole pelvic cavity, and to be continuous with the mass felt above on the left side. It had no connection with the sacrum. There were signs on this date of increasing pleuritic effusion.

On 1st August patient complained of severe headache, and soon became absolutely *blind* and *deaf*. Next day she had severe *convulsions*, during which both eyes were turned to the left, and twitching of both sides of the face, body, and extremities—but more especially of the left side—occurred. She also lost control of her *bladder* and *rectum*, and became quite livid. Five such seizures occurred within an hour, and in the space of two days there were in all eleven attacks. It was impossible to make an ophthalmoscopic examination.

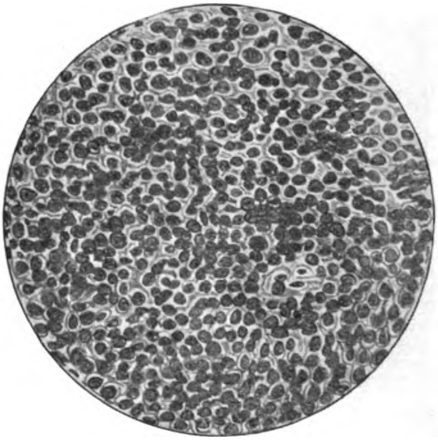


FIG. 7.

Section of ovary from Case II.

By 9th August patient had become much more intelligent, and had to a large extent regained her powers of hearing and vision. She no longer complained of pain. The urine was copious and the bowels moved freely, but the discharges seemed involuntary. At this time the fluid had almost disappeared from the pleural cavity, abdomen, and subcutaneous tissues.

In addition to the pelvic tumours, several large, rough, nodular, mobile masses were felt in the abdomen, and it seemed as if the kidneys were enlarged and palpable. The patient died on 10th August.

Autopsy.—On opening the thorax, the posterior surface of the sternum was found to be studded with a large number of glistening white irregular tumours, some of them as large as a hen's egg, and all presenting a peculiar ground-rice appearance on section. Several of these were adherent to the right lung, and similar growths occupied the anterior and posterior mediastina. The pericardium contained about an ounce of yellowish fluid. On the posterior aspect of the heart several nodules were seen to extend from the visceral layer of the pericardium for a short distance into the heart muscle. There were no valvular defects.

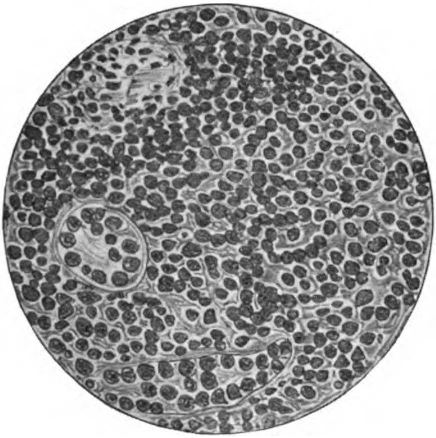


FIG. 8.

Section of kidney from Case II.

Both pleural cavities contained several ounces of turbid fluid. A large amount of similar fluid was present in the abdomen. The omentum was the seat of several tumours, the smallest resembling millet seeds, the largest attaining the size of an apple.

Similar growths were observed in the mesentery of the small intestine. The hepatic flexure of the colon was adherent to the greatly enlarged right kidney, and the splenic flexure was similarly related to the equally enlarged left kidney. These organs measured 8 inches by 4½ inches and 8½ inches by 4¾ inches respectively. The capsules were not adherent. On section, little, if any, normal renal tissue could be recognised (Figs. 4 and 5, pp. 391, 392). The appearance was strongly reminiscent of brain substance. The liver was normal, but there were two small growths in the wall of the gall-bladder.

The pelvis was filled by two large, hard, lobulated ovarian tumours (Fig. 6, p. 393). Numerous retroperitoneal glands were enlarged. The uterus, vagina, and rectum were unaffected. The left mamma was the seat of a tumour (5 inches by 1½ inch), which was adherent to the thoracic wall and had the same characters as the other growths (Figs. 7 and 8, pp. 394, 395).

The brain and membranes were normal.

Sections of the tumours presented all the features of round-celled sarcoma.

CASE III.—J. S., æt. 4, admitted to the Victoria Infirmary, under the care of Dr. Parry, 25th October, 1898.

About the beginning of September she complained of great weakness and was confined to bed. Her mother then noticed that her abdomen was swollen, and this condition gradually becoming worse, her abdomen was tapped by a medical attendant, and 7 pints of dark blood-stained fluid were removed. The effusion quickly reaccumulated, and patient was sent to hospital.

Before the onset of this illness patient had always enjoyed good health, but she had lost considerably in flesh and colour during the last two months, and on admission was pale, anæmic, and much emaciated. Temperature, 99·4°; pulse, 94. The abdomen was uniformly enlarged, and all the signs of ascites were present. The superficial veins were distended. On palpation, a large, hard, irregular, movable tumour was felt in the left hypochondrium. *Per rectum*, a large movable mass was felt in the left side, filling up the pouch of Douglas and continuous with the tumour felt above. The abdomen measured 28 inches at the umbilicus. The bowels were constipated; there was no urinary trouble. The heart sounds were feeble, but pure. A few moist râles were heard at the base of both lungs.

Two days after admission nitrous oxide was administered, and an incision was made into the abdominal cavity immediately below the umbilicus. A large quantity of blood-stained fluid escaped; also a few fragments of material with the appearance of omentum, which were retained for examination. On introducing the finger into the abdomen a large mass was felt in the umbilical region, and a smaller one behind the uterus—the enlarged left ovary. The patient becoming pale and collapsed, the wound was rapidly closed. After the operation she was continually sick, and died on the following afternoon.

There was no autopsy, but from the history, position of the tumour, and microscopic examination of the tissue removed at the operation, the case was diagnosed as one of sarcoma of the ovary, with metastasis in the omentum (Fig. 9, p. 397).

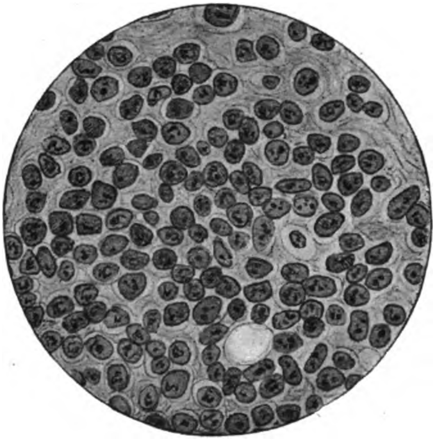


FIG. 9.
Section of omentum from Case III.

CASE IV.—M. W., æt. 3, admitted to the Royal Hospital for Sick Children, 29th May, 1888, under the care of Dr. Finlayson.

Previous to the present illness patient had been considered a healthy child. In the beginning of February she received an extensive burn by falling into hot water, and this kept her in bed during that month. Soon after this it was noticed that her abdomen became distended, and her breasts enlarged.

The size of the abdomen varied, but the breasts gradually increased. No secretion had been seen to come from the nipples.

"Although she is said to be only 3 years of age, she looks much older. Her face is pale, but her lips are of a bright red colour and somewhat thickened. Her appetite is good. The bowels at first were regular, but lately the movements have become more frequent.

"She has a slight cough and sweats at night, but the lungs are normal and the breath sounds pure.

"A discharge of clear fluid from the vagina has been present since the beginning of her illness.

"The abdomen measures 28 inches at the umbilicus, and all the signs of ascites are present. On palpation a large tumour is felt in the hypogastrium, easily made out above, but difficult to define below. It is tender to pressure."

About 12th June a decided change was noticed in the child's appearance. The abdomen had increased to 31 inches at the umbilicus, and the tumour could not be defined; but on deep palpation a movable body was felt. Breathing became short and was interfered with by the abdominal distension. The pulse also became feeble.

Operation, 14th June.—Abdominal section. A large collection of fluid in the abdominal cavity was drained off, and then a tumour came into view. It was evidently solid, and when aspirated nothing but blood was withdrawn. The incision in the abdominal wall was enlarged, and the tumour removed.

The patient rapidly sank, and died twenty-four hours after operation.

The tumour, which was the enlarged and transformed right ovary, weighed 3½ lb., and on section presented all the appearances of cystic sarcoma.

Dr. Finlayson's Report.—"The mammæ are developed as if naturally glandular. No areola at nipple. A few hairs of fine texture on breasts. Well-marked dark line, like that seen in pregnancy, extending from umbilicus to pubes. Small development of hairs on pubes like that seen in incipient puberty. The tumour felt in the abdomen is chiefly to right of the middle line, but after dipping down can be felt to the left side also. Feeling of fluid in the peritoneal cavity. Slight fulness at umbilicus, but no eversion. During respiration or coughing there is pain on handling the tumour. The area of the tumour is dull to percussion, and does not vary with position. The discharge from the vagina contains epithelial cells; no pus."

II.

It will be observed that the ages of our patients were 28, 23, 4, and 3 years respectively. The usual statement that ovarian sarcoma occurs four times more frequently under the age of 15 than in adult life is not borne out by recent investigations. According to Gebhardt, the majority of cases occur between 21 and 30.

Much more important points for consideration are (1) the length of time which may elapse between the onset of symptoms and death, and (2) the symptoms themselves in the order of their development, if, indeed, any orderly sequence can be said to exist.

As regards the duration of the malady, we have seen that it extended to nine months, four months, two months, and four and a half months in our four patients, and in each of these the beginning of illness was given with a more than usual degree of precision. The onset, therefore, was in each instance more or less sudden, coming upon the patients when in enjoyment of supposed good health.

As regards the symptoms themselves and their development, a distinction falls to be made between the youthful and adult patients. In the former it was the abdominal distension that first attracted attention, whereas in the two adults we have to note a remarkably uniform chain of symptoms. These are, in the order of their development, *epigastric pain*, *vomiting*, *pleurisy*, *diarrhœa*, *abdominal distension*. It is also worthy of remark that the epigastric pain and vomiting preceded the appearance of the other symptoms by a considerable interval of time, and, besides, were subject to intermission. If this can be established as characteristic of ovarian sarcoma in the adult, then we have in our possession a diagnostic and prognostic fact of the highest value, since it is difficult to believe that these symptoms can at the very beginning of the disease be due to secondary growths in and around the stomach. It is much more likely that they are due to toxines, which are now known to be produced by malignant tumours, and which, in the absence of secondary growths, cease to exert their influence when the tumour is removed.

It should be observed, too, that there was no interference with menstruation in either of the adult cases. Dr. Finlayson's case, on the other hand, was accompanied by an unusually early development of the external genitals and mammæ, although there were no signs of precocious menstruation such as have been recorded as preceding the occurrence of ovarian sarcoma in childhood.

How far the acute pleuritic affection which happened in Cases I and II can be regarded as intimately associated with the main disease, we have, unfortunately, no means of determining. It may have been a mere coincidence. All that can be said is that the accompanying effusion diminished, and almost entirely disappeared in the course of the diarrhœa which was so prominent a feature of both cases.

By far the most remarkable fact in our observations was the occurrence in Case II of sudden blindness, deafness, convulsions, loss of control of bladder and rectum, and the restoration of the visual and auditory faculties within a period of ten days. Pick has reported something analogous in the *Centralblatt f. Gynäk.*, 1894, No. 39. A patient, aged 16, who had never menstruated, was admitted to hospital in 1894, on account of increasing emaciation and abdominal enlargement, which was first noticed in June of the preceding year. Eight days before admission, complete blindness of the right eye had supervened. The ophthalmoscope revealed typical choked disc, with complete amaurosis. The arteries were thin and narrow: the veins, thick and varicose. There was no conjunctival reflex; no protrusion; no impairment of movement. The pupil was dilated, and did not respond to light or distance. The left eye was normal. The condition was at first thought to be due to metastasis.

The abdomen being opened, a large left-sided ovarian tumour was removed, which proved to be a round-celled sarcoma. The patient did well, and menstruated for the first time in June. From May onwards she had slight perception of light and was able to distinguish large objects. At a later date there was still considerable impairment of vision, which was limited to the upper quadrant of the field. The important point is that the affection of the right eye was not due to metastasis. Pick raises the question of regarding it as a local manifestation of cardiac weakness, or as the result of toxines originating in the malignant tumour just as occurs in diabetes.

We may mention here that Maitland Ramsay has recorded a case of temporary blindness during menstruation in a patient suffering from dysmenorrhœa. Her vision was greatly impaired during each period, and on one occasion was absolutely lost for two weeks. The optic discs were pale, but otherwise normal.

The above facts are of interest in view of what I have already said as to the likelihood of the earlier symptoms being due not to metastases, but to toxic influences operating on organs at a distance from the seat of the disease.

Pathological Anatomy.—No relation seems to exist between the development of the ovarian tumour and the secondary deposits. In Case I the ovary, though completely transformed, remained comparatively small, and the other ovary was normal. In Case II both ovaries were very much enlarged. Metastases, however, were equally numerous and extensive in both. This, with the presence or absence of adhesions and ascites, is quite in accord with what was previously known. Our second case, however, presented secondary growths other than those commonly described. According to Témesvary, metastasis occurs with relative frequency in the following organs—peritoneum, omentum, wall of stomach, pleuræ, lungs, uterus, liver, diaphragm, recto-vaginal connective tissue, mediastinum, tubes, small intestine, kidneys, vertebral column, subcutaneous tissue. This disposition, with one or two exceptions, was more or less preserved, but, in addition, the *pericardium*, *heart*, *muscle*, *mamma*, *gall-bladder*, *ribs*, and *sternum* were involved. The condition of the kidneys also seems to call for special comment. Both were very considerably enlarged, and presented on section the curious convoluted appearance shown by the accompanying photograph. Notwithstanding the extensive alteration and apparently almost complete disappearance of normal renal tissue, an excessive quantity of urine was excreted. There was slight albuminuria, but no estimation of urea was made.

With regard to the minute structure of the tumours, microscopic sections of the original and secondary growths of all the cases showed them to be examples of round-celled sarcoma.

Prognosis: Diagnosis.—Ovariotomy being the only possible mode of treatment, one naturally asks what chances of success attend operation. The most that at present can be said is that with early diagnosis the prospect does not seem to be so gloomy as has been supposed, but certain factors have to be reckoned with. Given a case of round-celled sarcoma affecting both ovaries, a fatal result is inevitable; but the prognosis is fair if the disease is confined to one ovary (Pick), and good if it is of the spindle-celled variety. The prognosis will be still better if the view of Gebhardt, that a slow fibromatous change precedes the malignant degeneration, is correct, and support is given to this by the alleged prolonged duration of the disease in several reported cases. Pfannenstiel claims to have obtained cures in seven out of fourteen cases, but all these were examples of spindle-celled sarcoma.

Obviously, everything depends on *early diagnosis.* That this might frequently be effected seems to follow from a consideration of our own cases (I and II), unfavourable as these were when they came under observation, especially if the view is correct that the early symptoms are due to the toxic products of the primary tumour, and that an interval sufficiently long to allow timely intervention precedes the formation of metastatic growths. I would therefore formulate this rule:—Given the case of a young and fairly healthy woman who has more or less suddenly become the subject of anomalous or ill-defined symptoms of disease, and more especially if these are of the nature of epigastric pain and vomiting which cannot be accounted for on ordinary grounds or corrected by appropriate remedies, a thorough examination of the pelvic organs should be made *in anæsthesia* with the view of excluding or recognising a possible cause of the disease in ovarian sarcoma.

REMARKS ON TUBERCULOSIS.[1]

By **HUGH KELLY, M.D.,**
President of the Glasgow Southern Medical Society.

In recent years there has been a wave of inquiry into the subject of tuberculosis. The old belief that the disease was hereditary, in the sense of actually being transmitted from parent to child, held the field till 1882, when Koch discovered the *bacillus tuberculosis;* many, of course, before Koch had expressed the belief that tuberculosis was a germ disease, but his epoch-making discovery settled the question. Since that time numerous investigations have been made in the hope of elucidating the life-history of the tubercle bacillus; and although this is yet by no means well established, much has been learned regarding its habitat and mode of propagation, as well as many of the conditions which favour or retard its development.

---

[1] Being the Presidential Address delivered to the Glasgow Southern Medical Society, on 2nd November, 1899.

It is not too much to say that since 1882 the public mind has been more or less constantly directed to this question, and this interest was greatly quickened by the premature introduction in 1890 of tuberculin as a curative agent. That event, though deplorable at the time by reason of the false hopes it raised, has proved beneficial, since it has left us an agent which, if not curative, is, when properly used, of the highest value in the *diagnosis* of tubercular affections; besides, the circumstances under which it appeared were so striking that public opinion became, as it were, rivetted to the tuberculosis problem. Hence, our Royal Commissions, and the now historic gathering in London under royalty, which gave birth to the Association for the Prevention of Tuberculosis, with its headquarters in London, and branches in all the important centres throughout the kingdom.

In the midst of all this stir, our late indefatigable and worthy secretary (Dr. Watson), who is nothing if not abreast of the times, instituted a discussion on tuberculosis in the Society, in order that the members might have an opportunity of learning the latest views on the subject. This discussion, you will remember, took place last session, and the following gentlemen took part in it—Professors Sir W. T. Gairdner, M'Call Anderson, and Glaister, and Drs. Eben. Duncan, R. M. Buchanan, and Erskine, as representing the medical aspects of the question; Mr. Trotter, veterinary surgeon to the city, Mr. M'Neillage, editor of the *Scottish Farmer*, Mr. John Speir, Newton, as representing the farming interest; Bailie Brechin spoke for the fleshers; and Dr. A. K. Chalmers and Bailie Dick represented the Health Committee of the City of Glasgow. From such a gathering much was to be expected, and we were not disappointed. The subject was discussed from all points of view, and the latest information was utilised.

The subject is so fascinating, and of such importance to us all, that I have resolved to make a summary of the discussion and present it to you as my Presidential Address.

Speaking generally, the discussion dealt with the causation, prevention, and treatment of tuberculosis.

The causes were shown to be—(1) *Direct*, *i.e.*, the introduction into the body of the tubercle bacillus by means of food, especially meat and milk, or by inhalation of the desiccated sputum of tubercular persons; (2) *indirect*, viz., hereditary predisposition, enfeebling diseases, overcrowding in houses and districts, insanitary dwellings, workshops, and occupations, and certain conditions of climate, soil, &c.

Although direct infection by meat is not very common, it is worth our while to consider the *incidence of tuberculosis in domestic animals.* The relative figures, according to Dr. Glaister, are—for oxen, 31·9 per cent; for pigs, 2·6 per cent; for calves, 0·19 per cent; for sheep, 0·00168 per cent; for the goat, 0·345 per cent; and for the horse, 0·223 per cent. It is clear that oxen take the lead in a very pronounced manner, and it is with those animals that man is chiefly concerned.

Statistics from various centres (Copenhagen, Berlin, Saxony) show that of oxen and calves, 27·4 per cent of the former, and only 0·24 per cent of the latter, are tubercular; one cannot fail to be struck with the great disproportion, and the obvious influence of age.

Although the term *oxen* includes animals of both sexes, the probabilities are strong that cows are affected to a greater extent than is represented by the figures just given (0·27 per cent).

Mr. Speir stated that when he began to test his herd with tuberculin, 50 per cent of the cows reacted, and his experience is that 30 to 35 per cent of animals, 4 to 5 years old, purchased in the counties of Dumfries, Ayr, Argyll, and Lanark are tubercular.

Mr. Trotter found that of 300 cows slaughtered a few years ago in Edinburgh, under the Pleuro-pneumonia Act, 120, or 40 per cent, suffered from tuberculosis, and the percentage varied from 12 to 80 per cent, according to the byre the animals came from.

Again, at Zwischau, in 1896, the proportion of cows proved by *post-mortem* examination to be tubercular, was over 51 per cent.

When we consider the different conditions under which the cow, as compared with the ox, lives, we need not be surprised at these results.

Another point of interest is that generalised tuberculosis occurs much less frequently than localised forms of the disease. The returns issued by the Leipzig veterinary authorities show that of affected animals only 5·8 per cent are the subjects of general tuberculosis; as a rule, the disease is confined to one organ, and to the lungs in particular (11,066 out of 13,688 animals), according to the same Leipzig authorities.

It is further interesting to note the proportion of animals suffering from generalised tuberculosis which display disease of the uterus and mammary gland.

Lungwitz has found the uterus, under such conditions, diseased in 57·9 per cent of the cows examined; we must remember, however, that an animal is generally disposed of before symptoms of widespread disease become obvious. Mammary tuberculosis, on the other hand, seems to be rare. Only 2 per cent of affected animals have tubercular udders. *Mastitis*, on the other hand, is common. M'Fadyean and Woodhead have found that 16 per cent of all cases of *mastitis* are really of a tubercular nature. The differential diagnosis is often difficult.

That local forms of the disease predominate would appear to be due to the fact that bacilli are not readily disseminated by the blood stream.

Mr. M'Fadyean injected 8 c.c. of an emulsion rich in tubercle bacilli into the jugular vein of three horses.

After a time (twenty-four to forty-eight hours) blood was withdrawn, defibrinated, and injected into the peritoneal cavity of guinea-pigs, and all these remained free from the disease.

Bang inoculated thirty-eight rabbits with the defibrinated blood of twenty tubercular cows; in eighteen instances the experiment proved negative; the blood from a cow the subject of acute miliary tuberculosis gave a positive result; a trifling affection in the remaining rabbit was thought to be due to accidental contamination.

There are few more striking facts than the rarity of tuberculosis in calves (0·24 per cent), and although the incidence of the disease rapidly increases with age, it is only 0·06 per cent at the end of the first year. Mr. Trotter gave the following table:—

Under 6 weeks, ...	0·04 per cent.
From 6 „ to 1 year, . . .	0·06 „
„ 1 year to 3 years, . . .	11·4 „
„ 3 years to 6 „ . . .	33·1 „
„ 6 years and over, . . .	43·4 „

Again, Nocard injected a large quantity of tubercle bacilli into the jugular vein of a goat. The animal continued to live for five years without any sign of disease, yet it was found *post-mortem* to have very extensive lung mischief; four-fifths of the pulmonary tissue were destroyed, and numerous bacilli were present. The animal had borne young in three successive years, a pair of kids each time: these displayed no symptoms of tuberculosis during life, and no signs *post-mortem*.

Other experiments go to prove that congenital tuberculosis is practically unknown, and that it is possible to breed from tubercular animals if care is taken to separate the young at birth, and rear them on healthy food away from sources of infection.

It is not the infectious germ, says Koch, that is transmitted, but certain peculiarities which are favourable to its development when it is brought into contact with the body.

We shall not be far wrong if we assume that, for all practical purposes, the young of animals are born free from tubercular disease, and that there may be a greater or less predisposition to it according as their parents are or are not tubercular.

How then do they become tubercular?

Bang has proved that, with ordinary precautions, cattle of tubercular parentage can be reared in perfect health to 7 years of age. His practice is to separate calves at birth, and feed them with pure milk, and keep them in a healthy atmosphere. The risk of infection under such conditions is slight. But let the health of the animals become enfeebled by the absence of hygienic surroundings, the tubercle bacilli need only be introduced to develop with frightful rapidity.

We were told, you will remember, that tuberculosis is very common among domestic animals in Denmark. From a collective investigation made by Bang in 1886, it would seem that the disease was rare up to the middle of the present century, and that it was imported by foreign breeds—Swiss, Angles, and Shorthorns. Herds which had not been recruited from outside were as good as free from the disease.

It is reasonable to conclude that the introduction of a tubercular animal into a healthy herd is a source of great danger. If the animal's lungs are affected, vast numbers of bacilli are ejected in fits of coughing; if the bowels are the seat of disease, bacilli are set free with the fæces, and so on; hence the contamination of the animal's surroundings, and very often of the food of other animals.

That enfeebling diseases predispose to tuberculosis we, as medical men, readily understand, though statistical proof is lacking. Where there is a catarrhal condition of the lungs or bowels a nidus exists for the reception and propagation of the tubercular bacillus—the lowered vitality of the tissues interferes with their normal defensive qualities.

With regard to the influence of insanitary dwellings, I would remind you of Mr. Trotter's experience. Out of a total of 300 animals, the percentage of those affected with tuberculosis varied from 12 to 83 per cent, according to the more or less insanitary state of the byre from which they came. That this was no exceptional experience is proved by what happened in London not long after. Many people seem to think that any hovel or shed is good enough for housing cattle. Such places are deficient in light, ventilation, and flooring; drainage is absent or represented by a barrel sunk in the ground at the end of the byre; whitewashing is never thought of. The accumulated cobwebs and dust of years may be seen everywhere—in crevices in the wood and stone work, rafters, roof and walls; and only too often the milk house opens off this quagmire.

It is obvious that under such conditions disease will spread very rapidly from animal to animal, and assume a steadily progressive character in each. This explains the old belief that bovine tuberculosis was incurable. Unfortunately the danger does not end here. Infected animals from such places are constantly being sent to marts and distributed all over the country to infect herds which might otherwise have remained healthy. I shall conclude this part of the subject by reminding you that Mr. Trotter informed us that in the Canton Frieburg in 1890, out of 14,142 cattle *insured*, there were 239 deaths (16·9 per cent), and 21 (8·7 per cent) of these were due to tuberculosis: but the percentage was only 3 per cent for the districts where the cattle were largely fed out of doors; whereas it was two and a half times greater where they were almost constantly housed and unnaturally fed.

If no other argument for the better housing of cattle was forthcoming, this should suffice.

Milk, as a vehicle for the conveyance of the tubercle bacillus may now be considered. That it is, unfortunately, a very serious offender in this respect, as it is with regard to other infectious diseases, admits of no doubt.

Of nine samples purchased in open market (Halle) and examined by Buege, two gave positive results when injected into guinea-pigs, although no trace of bacilli had been detected by the microscope in the milk.

St. Frus found that of twenty-eight samples purchased in Copenhagen, four produced the disease in guinea-pigs.

When the cows yielding the milk were subjected to a searching clinical examination, mammary tuberculosis was discovered in only a few members of two herds.

The Health Authorities of Liverpool found 2·8 per cent of the milk produced in city byres infective; and not less than 29·1 per cent of milk sent from the country was virulent.

Of 100 samples of milk taken from the London streets, 25 were tuberculous (Jenner Institute, 1899).

This, I think, is ample evidence that milk acts as a vehicle for the transmission of the tubercle bacilli.

How does the milk become infected?

There is reason to believe that milk from a healthy cow, or even from a tubercular cow so long as the udder is unaffected, is sterile, whilst milk from a tubercular udder is highly virulent. I have already referred to the incidence of tuberculosis and mastitis and the complicated problems connected therewith. Certain observations tend to make us hesitate to believe that the condition of the milk solely depends upon the presence or absence of disease of the udder. Bang took milk from 63 cows suffering from generalised tuberculosis but with apparently healthy udders. Nine samples proved virulent when injected into rabbits and guinea-pigs. He remarked that the udders were probably affected, but the disease was not appreciable by ordinary clinical means. This experiment illustrates the danger of using milk from tubercular cows.

The Corporation Hospital Authorities insist upon rejecting the milk of cows with inflamed udders, whatever the cause of the inflammation. I think they should go farther, and insist not only upon freedom from mastitis, but upon subjection of all the animals to the tuberculin test. This seems to be the logical outcome of the enquiry.

Another source of infection is *filth*. Mr. Trotter assured us that tubercle bacilli often gain access to milk by this medium. That scrupulous cleanliness is not always observed in the process of milking, and in the utensils used, is notorious.

Three samples of milk purchased in open market yielded the following analysis:—

	DRY SUBSTANCE.	FRESH SUBSTANCE.
1.	0·030 milligram.	150 milligram per litre.
2.	0·035 „	175 „
3.	0·71 „	350 „

As this filth is largely composed of fæcal matter, Mr. Trotter is probably right in inferring that, apart from the transmission of tubercle bacilli, it is in itself a powerful irritant, and predisposes to further infection. The *rôle* of aërial infection is apparent from the numerous opportunities of contamination from the time the milk leaves the byre till it reaches the consumer. The final distribution is too often by means of children. These, or their immediate associates, may, for aught that is known, be the subjects of tubercular or other diseases. I have reason to know that a very serious danger lurks here. An outbreak of scarlet fever in Kinning

Park was distinctly traced to a child engaged in the distribution of milk.

The other great source of direct infection is the sputum of affected persons. It is generally believed that there is little danger from the inhalation of the air expired by the phthisical, since it does not contain bacilli; so long, too, as the sputum remains moist it is comparatively innocuous, but when allowed to dry and become desiccated the resulting dust is very virulent. How great the danger from this source is becomes apparent when we consider the great preponderance of pulmonary as compared with other forms of tuberculosis.

Dr. Duncan told us it has been calculated that the collected daily expectorations from a well-developed case of phthisis pulmonalis contain seven millions of bacilli; and as in Glasgow alone there are continually under the influence of the disease, in one or other of its stages, a number of persons variously estimated at from five to ten thousand, and most of them careless about the disposal of their sputum, one can appreciate the enormous numbers of infective micro-organisms which beset us.

This, so far as the papers at my disposal treat of the subject, summarises what we know of the direct causes of tuberculosis; but there are many indirect causes which tend to make people fall victims to the disease, and favour its development and progress.

The first of these is heredity. Although we have abandoned the time-honoured belief in congenital tuberculosis, it is difficult for medical men who see so many cases which apparently can best be explained by that theory, to acquiesce in its summary rejection; but reject it we must. Hereditary predisposition must indeed be allowed. It would not be surprising if the offspring of stock, tubercular perhaps for generations, should develop into a type peculiarly liable to the attacks and effects of the tubercular bacillus. In the words of Sir William Gairdner, "There is something in the family constitution, something hereditary, which acts as a predisposing cause, and in that sense I believe that heredity is a very important factor in the spread of tubercular disease. A great deal might be said on the subject, but I prefer to leave it there"—and so do I.

That enfeebling diseases should act as a predisposing cause is more than probable, when we reflect that the tissues in a state of health are able to resist the action of the bacilli by ingesting and destroying them, and that this power is greatly diminished in conditions of ill-health.

As regards the influence of overcrowding, we have only to remember that pure air and sunlight are deadly foes to the tubercle bacillus, and that impure air and want of sunlight provide the conditions in which they best flourish, to understand how it was that our notoriously overcrowded barracks and gaols during last century and the earlier part of the present were very hotbeds of phthisis. The sleeping-rooms of these institutions were overcrowded, badly if at all ventilated, and in anything but a sanitary condition. To-day, when all these evils are overcome, soldiers and prisoners as a class suffer least from tuberculous diseases.

Dr. Chalmers gives the following very interesting table in illustration of the progressive increase of phthisis with overcrowding, or, in other words, of the fact that an increasing number of persons *per room* is accompanied by an increase in the phthisis mortality:—

ROOM DENSITY.	PHTHISIS DEATH-RATE FOR 100,000 CORRECTED FOR RE-DISTRIBUTION.
1·29,	159
1·77,	172
2·23,	235
2·54,	255

This shows how phthisis affects persons living under conditions of increasing respiratory impurity as indicated by room density.

In our large cities, and especially in Glasgow, there are always a great number of people living in one or two-roomed houses, in large tenements built in blocks, in the interior of which there is a huge volume of stagnant, impure air. In addition, such places are frequently insanitary. We are only too familiar with the arrangements of these tenements. One water-closet on a stairhead does service for 4 to 8 families or more, and said stair and stairhead is the playground for the children of these 4 to 8 families. How can one expect to see those children healthy, robust, and rosy-cheeked? Sundry evils are also to be found in the interior of these houses—especially built-in or press beds, and windows that are rarely opened.

But in Glasgow much of this is being remedied. Closets are being erected outside the buildings, and open spaces for playgrounds are being opened all over the city. These latter will certainly benefit the health of the younger members of the community.

It is regrettable that conditions of overcrowding and bad ventilation are frequently found in workshops. I know of one low-roofed office where the deaths from phthisis were so frequent that an official report was asked concerning it.

I myself have seen workshops which possessed the required amount of cubic space per worker, yet by reason of low roofs. want of ventilation and light, and more or less constant burning of gas, they became veritable Black Holes of Calcutta.

Certain occupations predispose to tuberculosis, especially those which expose the workers to irritation of the mucous membrane of the lungs. Hence the liability of stonemasons, textile workers, and workers in metal, &c., to phthisis.

Much has been written on the influence of climate and soil. The fact that phthisis occurs in all climes, and it would seem fully as frequently in tropical as in temperate regions, tends to show that climate alone is not an element of the first importance. But taken in conjunction with elevation above sea level it is otherwise, phthisis becoming less frequent the higher we ascend. The investigation of Bowditch, in New England, of Buchanan, in the counties of Surrey, Kent, Sussex, agree in proving that elevated regions and dry soils are unfavourable to the prevalence of phthisis; while low-lying and damp districts favour its development. It has also been found that the successful drainage of damp localities has occasionally affected a decided reduction in the mortality from phthisis.

I have now indicated the chief direct and indirect cause of tubercular disease. It still remains to indicate what is the opinion of those who took part in our discussion as to the best means of combating and defeating these causes.

That, of course, is a huge question, and years are demanded for its solution, but I believe that with the advance of science, and the education of the people, means will be found to make tubercular disease as rare as typhus and leprosy are now.

As regards the danger from tubercular meat, it has been shown that, with proper precautions of inspection and cooking, it is comparatively slight. Still it exists and should be met. By what means? First, by the rearing of animals free from disease. Bang has proved that this can be done, and what he has done others can do. When the farmer once recognises that it will pay him to keep a non-tubercular herd, it will be done. All that is necessary is the construction of hygienic byres, due care in feeding, periodical testing with tuberculin, and weeding out of reacting animals.

Again, animals should be sold in the open market, subject to the tuberculin test. By this means tubercular animals would soon disappear, and healthy herds would be preserved from the danger of infection by imported animals. The affected ones would find their way to the abattoirs, where their carcases would be passed with qualifications, or condemned as the case might be.

I am afraid years must elapse before the farmer becomes alive to the dangers of tuberculosis, and until then strict measures of inspection of the carcases of all slaughtered animals, by properly qualified inspectors, ought to be insisted upon. The Berlin system of boiling suspicious portions might be adopted. It seems hardly necessary to say that inspection should be done by skilled men and not left, as at present, to the caprice of any passing constable. It would be well, too, if the lungs were always attached to imported carcases.

As regards the milk question, it will be admitted on all hands that greater care should be taken with this article of food. It may be pure when it leaves the cow, but by the time it reaches the consumer it would be difficult to say what it does not contain. Absolute cleanliness in milking, as regards udder, *personnelle*, and utensils, is imperative. Milk for city consumption should at once be sealed up and not exposed to infection in transit. The utmost care must also be taken in its distribution. I have often thought that people connected with dairies should be registered, and an enquiry made if any illness befalls them or their families. By this means the spread of infectious diseases might often be checked. A similar control should be exercised over farms. There ought also to be periodic inspection of every herd by a qualified veterinary inspector, and the milk from any animal reacting to the tuberculin test should be rejected or at least boiled—better rejected—and the milk from any cow suffering from any diseases of the udder ought on no account to be used.

At present, and until these precautions can be carried out, the unanimous opinion was that milk should always be boiled. Too much has been made of the bogey that boiling spoils milk, or at least changes its taste so that it becomes disagreeable. I have found no evidence that boiling spoils the nutrient qualities of milk, and I do not think the taste is altered to the extent alleged. In my own practice I order milk to be boiled every day, and I do not meet with much opposition. In fact, in the light of present day knowledge of milk as a conveyer of disease, and of the gross carelessness shown in its distribution, I consider it little short of criminal to allow raw milk to be given to young children, or, for that matter, to anyone.

How to deal with the expectoration of phthisical patients is a difficult problem All the laws which can be made will not and cannot prevent people from spitting. It is possible that if the subjects of pulmonary phthisis were notified, and warned of the dangers to others from promiscuous expectoration, some good might be effected. But we are evidently not prepared for that. It may come, and I think one of the resulting benefits will be a diminution of the danger from expectoration. As it is, it would be well if patients were instructed how to deal with this sputum and what are the best means of destroying it. Disinfection of the clothing, bed, and house of phthisical patients should also be practised.

With regard to overcrowding, the sanitary authorities of our towns and cities are now so fully alive to the attendant evils that great improvements have been and are still being made in this direction. I may say that it fills me with pleasure every time I pass one of those open spaces, which are becoming so numerous in our city, and see the children at play. It is certainly a great boon to them, and must materially assist in keeping them in good health. It is a blessed change from closes and stairheads as playgrounds.

So far as the actual treatment of tubercular disease is concerned, we do not now take such a gloomy view as we did a few years ago. I was much struck with some remarks made by Dr. R. M. Buchanan on the effect of soil, air, and sunlight on the tubercle bacillus.

Sputum containing large quantities of bacilli retains its pathogenic properties for months, if exposed to the air in a small unhealthy hut built without a basement on clay soil; while if exposed in a well ventilated house built on a sandy soil, it soon loses its virulence. Again, exposure to free ventilation alone demands a period of over three days, whereas when there is direct sunlight in addition, a very short time is necessary to render the bacilli innocuous.

Here, I think, we have the key to the treatment of phthisis by fresh air and sunlight. We, as medical men, are well acquainted with the benefits to be derived from living in country places, 600 to 1,000 feet above sea level, where there is abundant sunlight and pure air. This is the secret of the Nordrach treatment which is now being so much vaunted, and I believe there are many places in Scotland where the same essential and beneficent results can be obtained.

I hope that the gentleman who occupies this chair in the year of grace 1999 will be able to say that tuberculosis is as extinct as the dodo, and take occasion to bless the memory of his predecessors for all they did in contributing to that end.

RECURRENT INSANITY: AN ANALYSIS OF RELAPSED CASES.

By HUGH KERR, M.A., M.D.,
Assistant Medical Officer, Bucks County Asylum.

THE term "recurrent," which is frequently employed in the nomenclature of mental diseases, is one to which various meanings may be attached. Thus, it may be made to embrace all cases in which there has been a previous or primary attack of insanity followed by recovery, or it may be restricted to cases belonging to a certain well-defined clinical type.

In this thesis the term will be used in a sense synonymous with "relapsed cases," the object being to make an analysis of cases admitted into the asylum for second or subsequent attacks, after apparent complete convalescence of sufficient duration after a primary attack to justify their discharge as recoveries. The term, used in this way, will be found a convenient one for designating those cases which, from many points of view, constitute an interesting and important class, and, at the same time, a comparatively numerous one, of insane patients admitted to asylums.

The cases upon which the following results are based are 450 in number, admitted consecutively into the Bucks County Asylum for the County of Buckingham during a period of four years ending March, 1898, so that at the time of writing a period of one year has elapsed since the last admission.

Of the 450 cases, 200 were those of males and 250 females. In the 200 males admitted, 39 were admitted for second or subsequent attacks; and of 250 females, 50 were relapsed cases, *i.e.*, 19·5 per cent of males and 20 per cent of females. This proportion is about the average which has occurred in county asylums in England and Wales.

In making an analysis of the admissions, the large proportion of 26 males and 19 females were found to be suffering from congenital mental defect, and of these, 7 males and 3 females were epileptics.

The large preponderance of male congenitals is noteworthy, being at the rate of 13 per cent of all male admissions, or almost double those of the females, 7·6 per cent.

If the number of congenital cases is deducted from the total admissions, we have 405 patients admitted, of whom 89 (39 males, 50 females) were relapsed cases, the ratio of recurrent to primary cases being 22·4 per cent for males and 21·2 per cent for females. If, further, we take into account cases admitted of general paralysis, epilepsy, organic disease of the brain, and senile dementia, we have left 134 males and 193 females suffering from recoverable forms of insanity, and of these 39 males (29·1 per cent) and 50 females (25·8 per cent) were recurrent cases. Thus it is apparent how large a proportion of presumably curable cases admitted into the asylum is made up of recurrent cases, being 27·8 per cent of the whole, or rather more than one fourth.

Having indicated the importance of this class of cases by reason of the large proportion which they bear to the curable cases admitted into asylums, an endeavour will be made to analyse the different causes at work in their causation, the influence of age and sex, the character of the mental disorder, its prognosis, &c.

Sex and age.—Recurrent attacks are found most frequently in the middle period of life and towards the decline. Thus, in the case of males, the two periods showing the greatest number of cases are 45 to 50 years and 55 to 60 years of age, in each of which are found 7 cases; and, again, from 65 to 70 there are 6 cases. From 35 to 70 years there are as many as 30 cases out of the 39, 7 cases being between 25 and 35 years of age, 1 case under 20 years, and one over 70. The disease, then, is eminently one of middle life, when several causes come into operation to produce an attack of insanity in persons who have at an earlier period suffered from a primary attack, *e.g.*, the struggle for existence becomes more severe, increased responsibilities for the care and upbringing of a family, reverses in business undertakings, and frequently decreasing powers to meet increasing demands on the energy of the individual.

Such causes as these, of which we have examples in the cases under consideration, are sufficient to produce an attack of insanity in an individual whose mental equilibrium, unstable it may be from inherited tendency, has been rendered more so by a previous attack. Combined with these also there may be found alcoholic excess, which in many cases seems to precipitate the attack.

In the adolescent cases, on the other hand, we meet with patients in whom there has always been defective moral control, which may be furthered weakened by vicious indulgence.

In the case of females we find the period from 40 to 55 years of age supplies 18 out of 50 cases; over 55 we have 14 cases; while from 25 to 40 we have 13 cases.

In considering the incidence of age in the female we have to take into account the child-bearing and climacteric epochs, which are both fruitful in producing attacks of insanity, more especially in cases where there has already existed mental reduction. In the case of females, an attack of insanity at an earlier period of life, or following upon child-birth, makes one look with foreboding to the time when increased demands are made upon the patient in the critical periods of gestation and parturition, and, again, later in life, when the profound physiological changes of the climacteric period take place, and the patient enters upon the decadent period of life. The adolescent period also furnishes a few cases, in which the features of insane heredity and defective mental organisation, to begin with, play an important part.

So far, we have considered the incidence of age in the recurrent attacks for which the patients were admitted to the asylum in the period under consideration, and it has been found that recurrent attacks are most prevalent in the middle period of life.

Age on first attack.—It is now proposed to consider the age on first attack in the same patients, which was ascertained in 34 of the males and 45 of the females.

Taking the adolescent period, it is found that while 7 males had been first attacked then, as many as 18 females had their primary attack at this period, a notably large preponderance of females. From 25 to 50 years of age 16 men had their first attack, while from 50 to 65 there are 10 cases.

In the females, from 25 to 40 there are 17 cases: and from 45 to 55, 9 cases.

These figures point to the conclusion that in the case of females the initiation of recurrent attacks is more frequent in the early periods of life than in the case of males; the early middle period furnishes the largest proportion of male cases, while in the case of both males and females a smaller proportion have their beginning in the climacteric period.

Hereditary predisposition to insanity.—In 32 of the male cases in which the family history was ascertained, 9 (or 28·1 per cent) were found to have insane heredity; while of 48 females, 16 (33·3 per cent) were noted as having hereditary predisposition to insanity.

In the case of males, the father was found to be the most frequently insane relative, while amongst females the mother was most frequent.

In several of the female cases the large number of insane relatives is noteworthy. In one case, the patient, who had her first attack in adolescence, was admitted relapsed three years later. This patient's mother had an attack of insanity, one sister was a patient in this asylum at the age of 22 suffering from acute mania, another sister at the age of 25 had an attack of puerperal mania.

Comparing these figures with the whole of the admissions with hereditary predisposition, we find 9 out of 36 male hereditary cases were recurrent; while in the case of females, of 67 cases ascertained, 16 were relapsed cases, or almost one-fourth of all hereditary cases were admitted for attacks—not the first.

It is not claimed that these figures represent accurately the amount of hereditary insanity amongst the admissions, as the difficulty in eliciting the facts of family history is very great, but they serve at least to emphasise the fact that in these recurrent cases a strong hereditary predisposition to insanity often exists.

Epilepsy was not ascertained to be frequent in the family history of the patients, being present only in 2 males and 3 females. This, in view of the opinion that certain recurrent cases are closely allied to true epilepsy, and may, indeed, result in it, is rather remarkable.

Alcoholic excess.—Of the other factors in the causation of recurrent attacks, alcoholic excess holds a foremost place, and that more especially amongst the males. In 10 cases (male) it was found present as an exciting or predisposing cause, whilst among the females it was ascertained only in 4 cases. In male cases it was found to exist at all ages, while in females only in climacteric cases.

In 3 male cases, who have been in the asylum repeatedly for successive attacks, the attack of insanity invariably began with a return to excessive alcoholic indulgence. In the case of a female, 55 years of age, in whom the first attack was due to long alcoholic excess, who was admitted in a condition of excited melancholia with hallucinations and persecutory delusions, and in whom apparently complete recovery took place in ten months, a second attack occurred five months later, caused by a return to excessive drinking. The second attack has resulted in chronic insanity.

Allied to the alcoholic habit, we may here cite one case (a female) in whom the morphia habit was the predisposing cause. She was depressed, with ideas of persecution, and was very querulous and emotional. She improved, and was discharged in three months relieved.

Masturbation was present in three of the male adolescents, and was partly the exciting cause. In one chronic case, with now increasing mental enfeeblement, it was coincident with, and lasted through the acute stage of the recurrent attacks. In another patient, admitted for the fifteenth time, masturbation was noted in the acute period of the attack, along with dirty and depraved habits, and on this occasion the attack was more protracted than previous ones. Amongst the females, in the case of young adolescents, the habit was noted in some instances in which there were also erotic tendencies and hysterical symptoms.

"Injury to the head" was noted in three cases only—2 males and 1 female.

Influenza accounts for four recurrent attacks. In the cases due to this cause, the patients were all over 45 years of age, and mental depression was the feature of the attack.

Worry over family matters and pecuniary losses in business were predisposing or exciting causes in 4 males and 3 females.

The puerperal period accounted for 2 females, lactation for 1, and pregnancy for 1.

Two married females had a recurrent attack coincident with mental illness of their husbands.

To summarise shortly the results of the preceding analysis, it is found (*a*) that hereditary predisposition to insanity is very frequent in the family history of patients suffering from recurrent attacks; (*b*) the neurotic temperament is revealed in numerous instances, as shown by defective self-control; (*c*) the middle period of life shows the greatest number of attacks; (*d*) in the female, gestation, parturition and the menopause are frequently the exciting causes, the latter being the most frequent; (*e*) in males, alcoholic excess is one of the most frequent exciting causes.

Nature of the attack.—The character of the insanity is found to depend upon a variety of circumstances, *e.g.*, the exciting cause, the period of life &c. The forms of insanity may be broadly divided into those which are characterised by mental exaltation, and those in which mental depression is the chief feature.

In the male cases, 28 had maniacal attacks, either simple exaltation or accompanied by delusions or hallucinations, while in 11 cases mental depression was present. Of the females, 37 were maniacal and 13 melancholic, *i.e.*, rather over two-thirds of the total cases suffered from mania. The melancholic cases were most frequent in the middle period of life. In the males more than half were from 40 to 55 years, and in the females an even larger proportion (9 out of 13). Maniacal forms were more frequent in the earlier period of life, and again in old age.

In considering further the nature of the attack, it will be found more convenient to take the different periods or epochs of life successively. In the adolescent period there are found relatively more recurrent attacks among females than males. The recurrent attack reproduces in its main features the characteristics of the primary attack; it is, as a rule, one of acute excitement, often great incoherence and irrationality, exalted ideas; restlessness, and apparently wanton mischief are often present; aggressive and impertinent conduct, defective habits, and frequently sexual perversion. In their course they follow the same road to recovery as primary cases; temporary improvement, with subsequent relapse, being usual before complete convalescence is established. The establishment of periodicity in recurring attacks at this period of life is of bad omen as regards the future history of the patient; lapse into chronic insanity or persistence of the recurrent attacks, with shorter "lucid" intervals, being frequently the result.

Climacteric period of life.—At this period is found the largest number of recurrent attacks. In a certain number the first of a series of attacks takes place at this time, but the majority of the cases, and more notably amongst the females, had their first attack at an earlier period. In several of the cases the recurrence at the climacteric has taken place after a long period of mental health, as, for example, where the patient has had one or more attacks in the adolescent or early adult period. As to the nature of the attack, the form of insanity, as a general rule, is that characteristic of the period of life. Instead of the acute excitement and sharp outbursts of the early period, the attack is characterised by depression and gloom, anxiety and restless foreboding, delusions often of a distressing nature, and frequently having a religious colour. In some cases, with established recurrent maniacal attacks, the acutely maniacal nature of the attacks persists, often, however, with periods of emotional depression. Suicidal tendency is of frequent occurrence, and the great bulk of the melancholic cases belong to this epoch. The causes to which the attack is due are often complex; worry and mental anxiety are frequently alleged, as a sequel to influenza, and in some instances the presence of the alcohol habit.

Senile period of life.—At this period of life we find that very few of the recurrent cases had their first attack, the great majority having had their first attack at an earlier epoch. The nature of the attack in typical cases is marked by great restlessness, rambling and incoherent talk, with much confusion of ideas. In many of the cases there is present some mental enfeeblement, and the hope of complete recovery is not good, being under 50 per cent, as compared with 67 per cent of all cases.

Alcoholic excess.—In several cases this factor was the chief. In these the onset was sudden and the attack acute, excitement being great, hallucinations of sight and hearing present, delusions sometimes exalted, in other cases, of suspicion and persecution; suicidal impulse was frequent, and dangerous aggression was also commonly present.

The main features of the different types of recurrent insanity have been indicated, and it remains still to analyse further the frequency of morbid impulse, and of the presence of delusions and hallucinations,

The suicidal tendency was noted in 12 (30·7 per cent) males, and in 15 (30 per cent) females. The tendency was confined mostly to patients of middle life, with melancholic symptoms, or mania with persecutory delusions. With the exception of 2 males and 4 females, all were over 40 years of age.

Homicidal impulse or violent aggressive conduct was present in 40·6 per cent of the male cases, and 36 per cent of the females. In many of these it was due to the violent excitement and impatience of control, in others to the delusions of the patients.

Delusions were noted in a large proportion of the cases (66·6 per cent of males, 50 per cent of females). Their character varied with the mental condition of the patient, period of life, and the exciting cause of the attack. In the alcoholic cases, in about one half exalted delusions were present, in the other, persecutory ideas. In two cases persistent delusions of food being poisoned were present. In the climacteric period, delusions of suspicion and persecution were the most frequent. Religious delusions were noted in some of the melancholic and adolescent cases.

Hallucinations were relatively infrequent, being noted in 17·9 per cent males and 16 per cent females. Visual and auditory hallucinations were noted in about equal proportion, and often combined. They disappeared early in the cases which recovered.

The prognosis in recurrent cases, as far as the result of present attacks is concerned, is good; as many as 28 males (71·8 per cent) recovered, while among the females, 31 (62 per cent) of the cases recovered. The recovery-rate in the male is much larger than that of the females, and is accounted for by the greater proportion of females having recurrent attacks at the climacteric who do not recover. Eleven males and 19 females did not recover: of these, 1 male and 2 females died. Of the remaining 10 male cases, 3 were discharged as relieved; of 16 females, 5 were given over to the care of their friends. The climacteric and senile periods furnish the great majority of the chronic cases; in 3 cases only was the age of the patient under 35 years.

As to the duration of the attack, 11 of each sex were well by the fourth month, and by the sixth month one half of the cases had recovered. After the sixth month there were one or two recoveries at each month up to the twelfth month. Of patients with one previous attack, 19 recovered out of 24 males, and 20 out of 29 females. Of patients suffering from a third attack, one half of the males and two-thirds of the females recovered, and about the same proportion from fourth attack.

A large proportion of recurrent cases ultimately become chronic lunatics, and this is further borne out by a consideration of the number of patients at present in this asylum suffering from second or subsequent attacks. Of 505 patients (220 males and 285 females), 21 males (9·5 per cent) and 33 females (11·5 per cent) are recurrent cases, or over 10 per cent of all cases.

From a consideration of the foregoing analysis, the following conclusions, amongst others, may be summarised:—

1. That recurrent cases form a large proportion of the curable cases admitted into asylums.
2. That in these cases hereditary predisposition to insanity is present in a greater number than in primary cases.
3. That alcoholic or other excess is a frequent factor in the causation of relapses.
4. That in cases in early life, menstrual irregularities in the female and masturbation in the male are frequently present.
5. That the puerperal period and the periods of gestation and lactation account for a large proportion of female recurrent attacks.
6. That the climacteric period in both sexes is a potent predisposing or exciting cause.
7. That the majority of the attacks occur in middle life; the first attack, however, is most frequent in the adolescent period, and is later in males than females.
8. That the prevailing forms of insanity are maniacal, melancholic forms being almost restricted to the middle period of life.

9. That the tendency is towards recovery, minor relapses being frequent before complete convalescence.

10. That the largest proportion of chronic cases is found in second attacks.

11. That in many of the cases a certain periodicity is established, the tendency, however, being towards chronic insanity.

12. That this class of patients furnishes many who are dangerous to themselves and others, a danger which is increased by the impulsive character of their acts, and the frequent absence of marked premonitory symptoms before the onset of the attack.

APPENDIX.

I.—TABLE SHOWING FORMS OF INSANITY, HEREDITARY PREDISPOSITION TO INSANITY, RECOVERIES, AND DEATHS.

Form of Insanity.	Males.				Females.			
	Admitted.	Hereditary Predisposition.	Recovered.	Died.	Admitted.	Hereditary Predisposition.	Recovered.	Died.
Congenital imbecility, .	19	4	...	1	16	3	..	...
Congenital, with epilepsy, .	7	1	...	1	3	...	...	1
General paralysis, . .	13	1	...	10	8	...	...	7
Acute mania, ...	46	11	34	2	61	25	36	6
Chronic mania, ...	15	3	1	2	21	3	...	1
Acute melancholia, . .	14	2	6	4	32	10	23	5
Chronic melancholia, . .	8	3	3	2	3	...	2	...
Senile insanity, . . .	20	1	...	16	14	1	5	3
Epileptic insanity, . .	8	...	...	1	12	3	1	3
Organic dementia, . .	9	1	...	3	12	3	...	7
Primary dementia, . .	2	...	2	...	3	...	1	...
Puerperal insanity, . .	...	...	...	...	15	3	8	1
Total, . . .	161	27	46	42	200	51	76	34
Recurrent mania, . .	28	8	21	1	37	12	24	2
Recurrent melancholia, .	11	1	7	...	13	4	7	1
Total, . . .	39	9	28	1	50	16	31	3

Number of cases—males, 200; females, 250.

II.—TABLE SHOWING AGE OF PATIENTS AT FIRST ATTACK, AND ONSET OF PRESENT ATTACK.

AGE.	PRESENT ATTACK.			FIRST ATTACK.		
	Males.	Females.	Total.	Males.	Females.	Total.
15 to 20, . .	1	...	1	3	9	12
20 to 25, . .	...	5	5	4	9	13
25 to 30, . .	3	3	6	3	5	8
30 to 35, . .	4	7	11	4	8	12
35 to 40, . .	2	3	5	1	4	5
40 to 45, . .	2	4	6	4	2	6
45 to 50, . .	7	5	12	4	5	9
50 to 55, . .	4	9	13	5	2	7
55 to 60, . .	7	6	13	2	1	3
60 to 65, . .	2	5	7	3	...	3
65 to 70, . .	6	2	8	1	...	1
70 to 75, . .	1	1	2	...	...	...

Number of cases—males, 39; females, 50. Age on first attack unknown—males, 5; females, 5.

III.—TABLE SHOWING NUMBER OF ATTACKS WITH RECOVERIES, RELIEVEDS, CHRONICS, AND DEATHS.

PATIENTS WHO HAVE HAD	MALES.					FEMALES.				
	Admitted.	Recovered.	Relieved.	Chronic.	Died.	Admitted.	Recovered.	Relieved.	Chronic.	Died.
1 previous attack,	24	19	1	4	...	29	20	2	6	1
2 ,, attacks,	6	3	1	1	1	9	6	1	2	...
3 ,, ,,	2	1	1	...	...	4	2	1	1	...
4 ,, ,,	2	1	...	1	...	2	...	1	1	...
5 ,, ,,	1	...	...	1	...	2	...	...	1	1
12 ,, ,,	...	...	...	...	..	2	2	...	...	..
13 ,, ,,	1	1	...	...	...	1	1	...	...	...
14 ,, ,,	1	1	...	...	...	...	...	...	...	...
Several ,, ,,	2	2	...	...	...	1	...	...	...	1
Total, . .	39	28	3	7	1	50	31	5	11	3

IV.—TABLE SHOWING DURATION OF ATTACK IN THE RECOVERIES.

Duration of Attack.	Number of Cases.		Duration of Attack.	Number of Cases.	
	Males.	Females.		Males.	Females.
1 month, . .	...	1	9 months, .	2	2
2 months, .	4	2	10 ,, . .	1	2
3 ,, . .	3	4	11 ,, . .	1	2
4 ,, . .	4	4	12 ,, . .	2	4
5 ,, . .	1	2	14 ,, . .	1	..
6 ,, . .	3	3	17 ,, . .	1	...
7 ,, . .	2	2	18 ,, . .	1	1
8 ,, . .	1	2	2 years, . .	1	...

Total number of cases—males, 28; females, 31.

Obituary.

WM. T. NICHOLSON, M.B., C.M.

It was with feelings of great sorrow and surprise that the public learned on 11th November of the death of Dr. W. T. Nicholson, the much respected Superintendent of the Victoria Infirmary.

Born at Blyth, Northumberland, forty-two years ago, Dr. Nicholson first made the acquaintance of our city in 1881, when, after passing his preliminary examinations at Durham University, he came to study for his medical degree at the University of Glasgow. As a student, his career was exceptionally brilliant, and his record shows that he was amongst the foremost in the prize list of every class in the curriculum.

After graduating in 1886, Dr. Nicholson first tried private practice as an assistant in Northumberland, but, preferring the more congenial duties of a medical institution, he was successful in his application for the post of Assistant Medical Superintendent of Barnhill Hospital in July, 1888. There he was eminently successful in his work, and on his leaving that institution in the autumn of 1894, Dr. Core, the Superintendent, bore eloquent testimony to his zeal, tact, and professional abilities.

At that time the Governors of the Victoria Infirmary elected him Superintendent of that important institution, and a wiser choice could hardly have been made. Well up in all medical subjects, courteous, gentlemanly, and kind, Dr. Nicholson was a man specially suited to fill such a difficult post, and to his peace-loving, unassuming, but strong nature, much of the smooth working which marks the management of the Victoria Infirmary was due.

Ever ready to sink all considerations of self, devoted to his duty, and methodical to a degree, he was always ready to be of assistance to anyone, and, in this way, he endeared himself to all with whom he came in contact—patients, nurses, doctors, and governors alike.

In 1895 he married Miss Margaret Dow, and the union proved in every way a fortunate and happy one. He and his family had just got settled in the new residence for the superintendent (Battlefield House, Langside), when his youngest daughter, a child of 18 months, died suddenly. Being a very devoted father, this was a blow from which he never seemed to rally, and very shortly afterwards he was seized with pleurisy, which was quickly followed by pneumonia. After an anxious and very serious illness, he was regaining his former strength quickly, when he was seized on Wednesday, 8th November, with rigors and vomiting. Endocarditis and pericarditis developing, the grave nature of his condition was soon apparent, and he died on Saturday morning, 11th November, leaving a widow and one child to mourn, with a large circle of sympathising friends, his irreparable loss.

HUGH RHODES, M.D.

We regret to record the death, which occurred on 16th November, of Dr. Hugh Rhodes, at the early age of 34. Born at Fulwood, he was educated at Dronfield Grammar School and Sheffield Grammar School. He afterwards studied medicine at Glasgow University. There he competed for, and secured, the Walton Bursary, also taking the first prize in anatomy. He took his M.B. and C.M. with high commendation at Glasgow in 1887; M.R.C.S. Eng. in 1890; and M.D. with honours at Glasgow in 1891. After leaving Glasgow he was for a short time assistant house surgeon at Carlisle Infirmary, and then became assistant house surgeon to Sheffield Infirmary, where he stayed three years, being house surgeon when he resigned, in 1892, to enter into partnership with Mr. W. Dale James. Dr. Rhodes was demonstrator in anatomy at the Sheffield Medical School, and lecturer on ambulance class work for the Sheffield School Board and the Midland Railway. On retiring from the infirmary, he was the recipient of substantial tokens of regard, and a similar tribute was paid to him by the Midland Railway. He married about three years ago, the youngest daughter of the late Mr. Edward Lucas, of Rose Hill, Dronfield, and leaves one daughter. Deceased was much respected in the medical profession, and there will be general regret that so promising a career should be cut short so prematurely.

CURRENT TOPICS.

"SCOTS NORDRACH SANATORIUM."—We have pleasure in informing our readers that there is at present being erected on Deeside a Sanatorium, where the Nordrach system of treatment for phthisis pulmonalis can be carried out. We express no opinion upon the merits of the details of the Nordrach system, but we think it right that if our phthisical patients desire to try the system they should have the opportunity within the borders of our own country. In England there are already such sanatoria; in May of next year we hope to have one in Scotland. For the sake of the poor consumptive, we trust that there is more hope for him in the Nordrach "cure" than there was in Koch's tuberculin; however, those who desire to know what has been, and is to be, done in Scotland will find much information in the following notes by Dr. D. Lawson, one of the physicians to the "Scots Nordrach Sanatorium":—

"As its name implies, its object is to provide our own land with an opportunity of treating her own well-to-do tubercular patients by that variety of open air *regime* which has met with such singular success at the hands of Dr. Walther in the Black Forest, Germany.

"Before the plans were drawn up, or the site selected, it was thought good to obtain the opinion of a number of the leading consultants of Scotland. Accordingly those gentlemen were approached on the subject, and at the suggestion of Professor M'Call Anderson, a meeting was arranged at which

Edinburgh and Glasgow opinions were fairly represented. Professor Findlay, of Aberdeen, would also have been present but for force of circumstances which necessitated his presence in another part of Scotland on the evening which had been fixed. This meeting took place in the Glasgow Central Hotel, in July, and Glasgow was represented by Sir William T. Gairdner, Professor M'Call Anderson, and Dr. Robertson. Dr. Gibson and Dr. Muirhead were also present, Sir Thomas Grainger Stewart being prevented by the condition of his health at the time.

"Amongst other points which were considered were the best known health resorts in Scotland, with reference to their ascertained—

"1. Annual rainfall.

"2. Mean temperature in summer and winter months.

"3. Nature and prevalence of winds in summer and winter months.

"4. Nature of soil—porous or otherwise.

"5. Purity of air as indicated by—(*a*) percentage of ozone; (*b*) absence of any town, or other possibility of contaminating source within at least 10 miles.

"6. Pine forests, as affording—(*a*) therapeutic vapours, terebene, &c.; (*b*) shelter.

"7. Sunshine—percentage.

"As a result of this conference, these gentlemen unanimously decided that the most desirable district in Scotland was middle Deeside. Accordingly, efforts were at once made to procure a site in that district. After considerable delay and frequent disappointments, through the kindness of Sir Thomas Burnett (who has most generously aided the scheme from the first) these efforts were attended with success, an almost ideal site being granted by him on his estate not far from Banchory. The site taken is richly wooded land at an altitude of over 300 feet above sea level, and extends to over 25 acres. When that had been done, along with an Aberdeen architect I went to Germany, and, through the kindness of Dr. Walther, was enabled to comfortably study his buildings and arrangements—architectural and otherwise. We then came to England and thoroughly looked into the structural arrangement and management of the best model of Nordrach in England, viz., Nordrach in Mendip, which is under the care of Dr. Thurnum. I may say that a few weeks later, along with Professor M'Call Anderson, I again visited and inspected this place. The architect was then instructed to prepare plans for the Deeside Sanatorium, embodying all the most desirable points in these institutions, and improving them where improvement was considered to be possible. The result now is that we are able to announce that by May, 1900, the sanatorium, with accommodation for forty patients, will be open to receive patients. I may say that already some have booked beds.

"Everything will be furnished on a plan and scale commensurate with our present knowledge.

"Every bedroom will be furnished with its own shower-bath, and fitted-in basins with hot and cold water supply. The heating will be by means of hot pipes, and the lighting by electricity. Two physicians, myself and another, will devote their whole time to the care of the patients. Each will be seen professionally three times daily; temperature taken rectally three or four times daily; and, indeed, all the details of the Nordrach system will be carried out to a degree.

"As this is a purely Scottish effort, provided to meet a much felt Scottish want, it is desirable that a maximum of publicity should be given to it in Scotland. It has been noticed in some quarters in England during the past week (*vide Lancet*, *British Medical Journal*, and *Practitioner*), and as a result of that, applications have already been received from English patients. If we were quite sure of sufficient support in Scotland, an effort would be made to give Scottish patients a preference."

MEDICAL CLUBS.—It will be known to many of our readers that the Southern Medical Club was opened in this city in June, 1898. There is reason to believe that it was, and still has the honour to be, the first of its kind in the kingdom. It was founded with the object of providing a convenient meeting-place, a reading-room supplied with the leading medical journals, a reference library, and a billiard-room. The Club has a membership of 100, and the annual subscription is only one guinea.

News is now to hand that a Club Médical has been opened in Paris. The bulletin of the *Gazette Médicale de Paris* describes it as "une innovation qui est digne de retenir un instant l'attention de nos lecteurs." It is not, however, the first of its kind, as a similar club was opened a year ago in Berlin.

The objects of the Club Médical seem to be very much the same as our own, which it further resembles "en raison de la modicité de la contribution annuelle," which places it "à la portée de tous." We ought to say that the Club has been created "en vue de l'Exposition de 1900," and already it numbers more than 200 members.

We should like to bring under the notice of our readers the concluding words of the bulletin as applicable to the Southern Medical Club — "Plus ce groupe sera nombreux plus les avantages matériels du cercle seront importants. C'est vous dire, très honorés confrères, qu'il faut être des nôtres et le plus vite possible. Les premiers inscrits seront les premiers élus; et vous verrez que vous serez les premiers à regretter de n'avoir pas plus tôt répondu à notre pressant appel."

ANDERSON'S COLLEGE MEDICAL SCHOOL.—Dr. Carstairs Douglas, B.Sc., has been appointed Professor of Medical Jurisprudence in room of Dr. R. M. Buchanan, who was recently appointed Bacteriologist to the Corporation. Dr. James Galbraith Connal has been appointed Lecturer on Aural Surgery in room of Dr. James Erskine, resigned.

ROYAL HOSPITAL FOR SICK CHILDREN (DISPENSARY).—The following appointments have been made:—*Extra Honorary Physician*, John G. Gray, M.D., F.F.P.S. *Extra Honorary Surgeons*, J. Francis Gairdner, M.B., C.M., M.R.C.S., L.R.C.P.; Alfred A. Young, M.A., M.B., C.M.

GLASGOW UNIVERSITY: GRADUATION CEREMONY. — On Thursday, 2nd November, the graduation ceremony took place in the Bute Hall of the University. There was a large attendance of students. Principal Story having engaged in prayer, Professors Cleland and Stewart announced the names of the graduands, who came up in turn to be capped, amid cheers. The following is a list of the medical graduates:—

Doctors of Medicine (M.D.). I. With Honours—John Souttar M'Kendrick, M.B., C.M.; William Scobie, M.A., B.D., M.B., C.M., Scotland.

II. With Commendation.—John Gilchrist Gray, M.B., C.M.; William Edgar Macharg, M.B., C.M., Scotland; James Service Ormond, M.B., Ch.B., Australia.

III. Ordinary Degree.—Archibald Smith Dick, M.B., C.M.; William M'Alister, M.B., C.M.; John MacDonald, M.B., Ch.B., Scotland; Arthur Alfred Pratt, M.B., C.M., England; Leonard Williams, M.B., C.M., Wales; Alexander Grieve Young, M.B., C.M., Scotland.

Bachelors of Medicine (M.B.) and Masters in Surgery (C.M.).—John James Edgar, England; Robert Hastie, Scotland; William Shearer, Scotland.

Bachelors of Medicine (*M.B.*) *and Bachelors of Surgery* (*Ch.B.*).—**Thomas Bullough Calland, England; Jessie Sophia Beatrix Hunter, Nicol Jamieson, Andrew Stewart Lang, Robert Lunan, Peter M'Fadyen, John M'Gilchrist, Charles Forbes Maclean, Sarah Maude Robertson, Maud Hamilton Spencer, Peter Alexander Steven, James Douglas Carnon Swan, Arthur Vost, Scotland.**

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—At the annual meeting of the College, on 18th ult., Dr. James Dunsmure was unanimously elected president for the ensuing year; and the following gentlemen, having passed the requisite examinations, were duly elected Fellows of the College:—Francis Horatio Amner, L.R.C.S.E., Tongkah, Siam; Nathaniel Thomas Brewis, F.R.C.P.E., Edinburgh; Arthur Mayers Connell, M.R.C.S. Eng., Sheffield; George Aubrey Jelly, M.R.C.S. Eng., Sunderland; Robert Holbourne William Johnston, L.R.C.S.E., Maidstone; John Norman Macleod, M.B., C.M. Glasg., Indian Medical Service; Robert Henry Parry, L.R.C.S.E., Glasgow; Henry Carden Pearson, M.B., C.M. Edin., Darlington; John Connel Ramsay, L.R.C.S.E., Peebles; Donald Ferdinand Schokman, L.R.C.S.E., Colombo, Ceylon; John William Struthers, M.B., Ch.B. Edin., Edinburgh; and Andrew Hutton Watt, M.B., C.M. Edin., Edinburgh.

SEVENTH INTERNATIONAL OTOLOGICAL CONGRESS.—Owing to the date of the International Medical Congress falling in 1903, it has been decided that the next International Otological Congress shall take place, not in that year, but in 1902. The meeting will be held at Bordeaux, under the presidency of Dr. Moure.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on 14th July, 1900, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the Secretary of the College on or before 1st May, 1900. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of the competition that the successful essay, or a copy of it, shall remain in possession of the College; other essays will be returned upon application within three months of the award. The Alvarenga prize for 1899 has been awarded to Dr. Robert L. Randolph, of Baltimore, Md., for his essay entitled, "The Regeneration of the Crystalline Lens: An Experimental Study."

CARNIGEN (La Société Anonyme "Ox Beef," Brussels; Sole Agents for Britain, Leete & O'Connell, London, E.C.).—This new meat powder has a whitish colour, and an agreeable taste not unlike that of beef-tea. It dissolves with remarkable rapidity, and may be conveniently administered in a small quantity of soup, milk, or water. One or two tablespoonfuls may be given thrice daily to patients suffering from febrile, cachectic, and gastric disorders, or from other conditions in which the dietary must be both nourishing and easily digested.

MEETINGS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1899-1900.

MEETING II.—13TH NOVEMBER, 1899.

The President, DR. THOMAS BARR, *in the Chair.*

I.—A DEAF-MUTE OPERATED UPON FOR OTITIC EXTRADURAL ABSCESS, AND FOR THE RADICAL CURE OF CHRONIC MIDDLE-EAR SUPPURATION (STACKE'S OPERATION).

BY DR. THOMAS BARR.

Dr. Barr showed a boy, aged about 10, a deaf-mute, upon whom he had operated for otitic extradural abscess, and for the radical cure of chronic middle-ear suppuration (Stacke's operation). Deafness, followed by loss of speech, had supervened on purulent otitis media at the age of 2½ years. Five years after this pain was complained of in the right ear, and was attributed to a blow. This was accompanied by general malaise, rigors, and elevation of temperature. Stacke's operation was performed the day after admission to the Ear Hospital; but on rigors persisting, the parts were more freely opened up, and a quantity of fœtid pus evacuated from sigmoid groove. The parts cicatrised subsequently.

II.—CASE OF PURULENT THROMBOSIS OF LEFT LATERAL SINUS.

By Dr. Thomas Barr and Dr. J. H. Nicoll.

Dr. Barr and Dr. J. H. Nicoll showed a second case, of which the following is a brief summary:—Purulent thrombosis of lateral sinus; septic pneumonia, going on to abscess and gangrene; chronic purulent otitis media.

The patient was aged 30, and had suffered from discharge from the left ear for fifteen years.

The present condition commenced with violent earache, along with tender swelling of the side of the head and neck. Frequent and severe rigors, with constant vomiting, were present, with a temperature suggestive of pyæmia.

There was no external evidence of mastoid disease (the above-mentioned swelling having gone down); but, on opening the parts, granulation tissue and pus were found in the tympanum, and a cavity, packed with cholesteatomata, in the mastoid. The sigmoid groove was much eroded. On removing the diseased tissue, the sinus appeared normal. The cavity was dressed. The pyæmic temperature continuing, Dr. J. H. Nicoll was asked to see the case, and eleven days after the first operation the internal jugular was ligatured in the neck, and the lateral sinus entirely cleared out. The patient untimately recovered.

[The detailed account of these cases will be published in the *Glasgow Hospital Reports*, vol. ii.]

Dr. Finlayson said that when he heard from Dr. Barr of the lung implication, he had small hope of surgical interference being followed by any good result. When, however, he had an opportunity of seeing the patient after the operation, it was quite evident to him (Dr. Finlayson) that there was a decided chance of the patient pulling through and recovering from his dangerous condition. On examination of the chest he could not determine the presence of a pulmonary cavity, although the quantity of pus expectorated pointed to this. He again saw the patient on his return from the country yesterday, and there was no sign of cavity; but it was

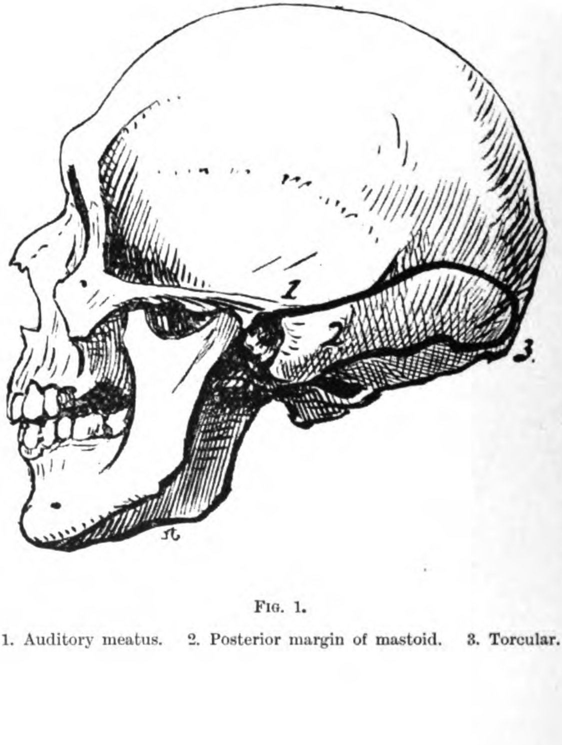


FIG. 1.

1. Auditory meatus. 2. Posterior margin of mastoid. 3. Torcular.

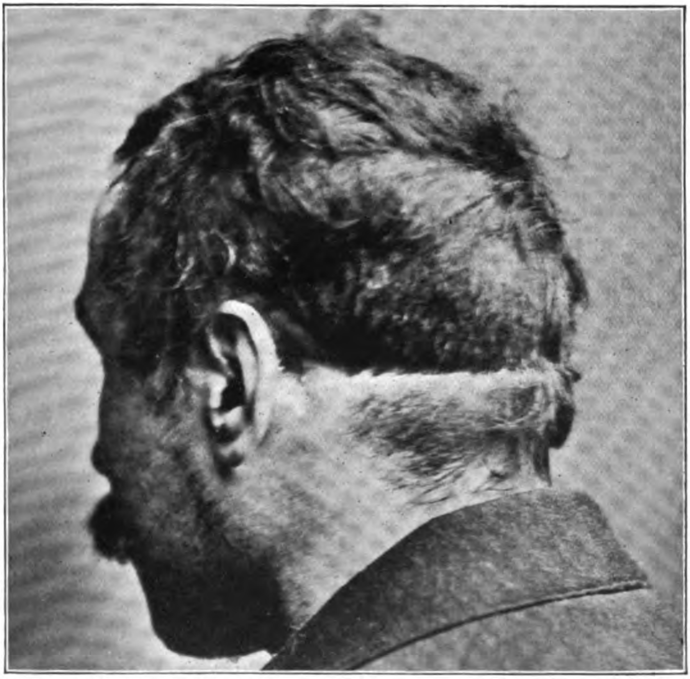


FIG. 2.

Photograph of patient three months after operation. Scar showing extent of bone removed and sinus laid open.

obvious that the right side of the chest had fallen in, and that on this side there was diminution of expansion on movements of inspiration. This he considered resulted from contraction of the area of lung-tissue which had been invaded. Sometimes the after-symptoms of embolism resembled those of phthisis pulmonalis. The case was a gratifying one, and exemplified a rescue of a patient under the most adverse circumstances.

Dr. Alex. Robertson asked if there had been a large quantity of pus found in the extradural abscess in the first case.

Dr. Barr said that the quantity had been considerable.

Dr. Robertson, continuing, thought percussion of the skull might have been of value in determining the presence of extradural abscess, seeing that it had been of large size. When pus was present in large quantity, a dull note was obtained on percussion. As regards the second case, he considered the result most gratifying, the systemic infection having been very complete. He would ask if there had been any external indications of the extension of pus within the sinus. Sometimes there was present swelling with œdema over the mastoid and in the upper part of the posterior triangle of the neck, together with deep-seated pain on pressure in the latter situation. He would also refer to distension of the veins on the opposite side of the neck as a sign of sinus-obstruction. That would have suggested a blockage in spite of the healthy external appearances of the sinus. Ligature of the internal jugular could not always be relied on, as one must bear in mind that in some cases infection travels by condylar veins and occipital sinus to cervical plexus, vertebral and subclavian veins, although by this route the infection was not likely to be so extensive. It was quite possible to have infection by this channel even after ligature of internal jugular vein. The rise and fall of temperature was suggestive of sinus thrombosis, but was not thoroughly reliable as a sign. He knew of a case, with a similar temperature, in which the sinus had been opened and found patent.

Dr. J. A. Adams asked why the jugular vein was not divided between the ligatures. He also asked if it would not be better to have a skin covering over the bony cavity left by Stacke's operation, and so lessen the liability to catarrh.

Dr. J. H. Nicoll—I do not think I need add much to the very full account of the case which Dr. Barr has just given. On this skull I have indicated approximately the area of bone removed in order to lay open the sigmoid and lateral sinus from mastoid to torcular (Fig. 1).

Examination of the patient's head shows that gap to be occupied by firm fibrous tissue, which in time will probably, as happens in many of these cases, be partially or entirely replaced by bone. The photograph taken to-day shows the fibrous and cutaneous scar.

In his account of the case, Dr. Barr has, with characteristic modesty, largely effaced himself, for, if the patient's present healthy condition be the result of the operative measures carried out, he owes his life to Dr. Barr. When I first saw him he seemed so hopelessly ill that I was inclined to think operation useless, and even unjustifiable. Dr. Barr's logical argument, however, converted me. What Dr. Barr, in effect, said was—"Here is a patient dying of pyæmia. In many cases of pyæmia we do not know where the primary pyogenic focus is. Here we do. Why not clear it out?" I, therefore, tied the internal jugular vein in the neck, and laid open and cleared out the purulent sinus in its whole extent (Fig. 2).

With regard to the general question of the operative treatment of these purulent intracranial sinuses, experience is not yet sufficiently wide to enable us to reach broad conclusions of much value. The experience I have had of the operative treatment of such cases—with Dr. Barr in the Ear Hospital, when on duty in Professor Macewen's wards, and otherwise—has led me to form certain opinions, however, which appear to be confirmed by increasing observation.

It is clear that the statistics in such affections are steadily improving. This is probably to be accounted for in two ways —(1) Increasing confidence enables us to carry out, as in this case, radical operations on a scale which ten years ago would have been regarded as unjustifiable; (2) we get those cases sent at an earlier stage than formerly.

The work of Macewen, Horsley, and others is convincing the profession that cases of purulent affections of the intracranial sinuses are, for the most part, fatal unless treated by operation; that operative treatment has already cured a number; and that delay in having recourse to it frequently destroys its chance of success.

Ligature of the internal jugular in the neck—suggested by Horsley—largely limits, though it does not entirely remove, the chances of general pyæmic infection. The operation is not difficult, and can be performed without much additional expenditure of time.

In certain cases it is impossible, without opening the sinus, to tell whether thrombosis exists. Dr. Barr and I can refer to several where, on the sigmoid sinus being exposed, it had a healthy bluish appearance, and was free from granulation tissue externally, and exhibited pulsation, and was collapsible by digital pressure, and where we concluded from these evidences that the vessel contained fluid blood and not thrombus, and, therefore, did not open it. In these same cases we found, *post-mortem*, evidence of our error. The sinus did contain a stream of fluid blood on its external or superficial side, but along its internal or deep side (that in contact with intracranial abscess or purulent meningitis as the case might be) adhered a purulent thrombus, which had been the starting-point of a general pyæmia.

So far as present experience forms a guide, therefore, it would appear to be wise, in cases in which presumptive evidence of thrombosis exists, to open the sinus before deciding that such is not present. In following such a course, however, safety will, in a large measure, depend on the recognition of two things:—(*a*) If the sinus be opened through a purulent mastoid cavity which has just (at the same operation) been exposed and cleared of its contents, there is considerable risk of pyogenic material finding its way from the latter into the sinus, which, possibly, the exploratory opening has demonstrated to be free from purulent thrombus. Under such circumstances, delaying opening the sinus for twenty-four or forty-eight hours (during which time the mastoid cavity has been sterilised by antiseptic packing) will remove or lessen the risk. Should the symptoms be too urgent to admit of delay, the risk may be minimised by the expenditure of some time during the operation in thorough antiseptic treatment of the bony cavity previous to opening the sinus. (*b*) A sinus under suspicion ought not to be opened unless the operator is prepared to at once proceed with a more or less extensive operation for the complete removal of the purulent thrombus, should such be found. Imperfect measures may result merely in the breaking up and detaching of purulent emboli, with resulting fatal pyæmia.

Replying to Dr. Adams, Dr. Nicoll said that he had not in such cases divided the jugular in the neck between the ligatures, as he was not convinced that such a procedure might not result, in the struggling and restlessness of a delirious patient, in the slipping of the lower ligature.

Dr. Barr, in reply, stated that swelling had been observed on the affected side, but this was before he had seen the case. There was no tenderness over the jugular vein, and no evidence of thrombosis of the sinus or its tributaries. He considered it advisable to leave the bony cavity open for a year or two so as to be sure of the absence of discharge. If it were still well at the end of that time, measures might be taken to cover it over. In the meantime it was kept loosely packed with iodoform gauze. Hearing is not interfered with by this operation, as the cavity is well behind the line of the ossicles. If the jugular vein were divided in the neck, there would be a risk of infecting the tissues of that region.

III.—SUBCUTANEOUS CAVERNOUS NÆVUS OF TEMPORAL AND PALPEBRAL REGIONS.

By Dr. Alfred A. Young.

Child, aged 7 years, in excellent health, except for a swelling in the left temporal and frontal regions, and involving the left upper eyelid in such a manner that the eyelids remained closed, and the whole orbital space was unduly prominent.

The skin over the tumour appeared quite healthy. The left upper eyelid could be raised by the hand, and disclosed a perfectly healthy eye. The under surface of the eyelid appeared normal.

The tumour, on examination, presented a soft, almost doughy, consistence, and in the temporal region several firm cord-like structures could be felt; and in that region, also, marked prominences and irregularities of the underlying bone above the zygoma could be made out.

The swelling was noticed by the mother shortly after birth, and seemed to grow with the child's growth, but had remained stationary for the last three years. It used to become markedly blue and more swollen on the child crying.

At present only a slight bluish colour appeared in the left upper lid on exertion.

Dr. Young considered the case one of subcutaneous cavernous nævus, growing, probably, in connection with the extremity of the first branchial cleft, and undergoing in parts a process of natural coagulation. He had brought it before the Society with a view to suggestions as to treatment. He thought that if electrolysis were employed, the resulting fibrous tissue would not improve the condition of the eyelid. If one could be sure of the tumour being encapsulated, one might excise it.

Dr. Nicoll was inclined to think the presence of hard bodies in the swelling suggested a dermoid, but its diffuse character was against this view. He could not suggest any treatment.

IV.—SPECIMEN OF OMENTUM AND BOWEL FROM A CASE OF FATAL HÆMORRHAGE FROM THE BOWELS—THROMBOSIS OF SUPERIOR MESENTERIC VEIN.

By Dr. Donald Fraser.

The patient was a blacksmith, aged 30, and was admitted to the Paisley Infirmary on account of severe abdominal pain, accompanied by vomiting, of some weeks' duration.

Three years previously had had rheumatic fever, complicated by endocarditis.

For the last two years he had suffered from dyspeptic symptoms, and it was on account of exacerbation of these that he sought admission to the infirmary.

Beyond emaciation, with dilatation of the stomach, little could be made out. He made complaint of lumbar pain, but did not refer it to the abdomen.

The night after admission he was seized with diarrhœa; this became bloody, and was succeeded by copious hæmorrhage, which proved fatal.

Post-mortem: Chest.—Heart showed hypertrophied left ventricle, with old inflammatory changes at the mitral orifice.

Abdomen.—A portion of the ileum, 5 feet in length, and with lower end situated 3½ feet above the ileo-cæcal valve, was congested and œdematous, and almost gangrenous. The edges were abrupt. Corresponding mesentery was thickened, congested, and œdematous. One of the three tributaries of the parent mesenteric venous trunk had undergone thrombosis. There was *post-mortem* clot in upper part to the portal vein. Liver fatty. Spleen, measuring 8 inches by 6 inches by 4 inches, scarred by remains of former infarctions.

Dr. Jas. A. Adams was much interested in the specimen. Quite recently a patient was admitted into his wards in the Royal Infirmary with complaint of great abdominal pain accompanying a sudden distension of an umbilical hernia. The hernial sac was opened, and the bowel easily reduced. The patient died suddenly four hours after the operation. Before death he had a fearful hæmorrhage from the bowels, which resulted in the fatal syncope.

Mr. Maylard stated that such cases as Dr. Fraser's were sometimes mistaken for acute intestinal obstruction. As a rule, there is vomiting and pain in the early stages. The amount of hæmorrhage varies, and some would almost declare a possibility of diagnosing an embolism from thrombosis. If the superior mesenteric vessels be involved, the pain is said to be situated near the umbilicus.

Professor M'Call Anderson agreed with what Mr. Maylard had said with regard to the seat of pain in these cases. His experience was that the pain was complained of in neighbourhood of the umbilicus, and he regarded it as unusual that this patient had complained of pain confined to the lumbar region.

Dr. Fraser, in reply, stated that previous to admission into the infirmary the patient had complained of severe pain in the abdomen, varying in situation, and causing him to double up. There was vomiting, but no abdominal distension. After admission to the infirmary abdominal pain was not complained of, but the patient stated that there was pain in the lumbar region. There had been no thought of intestinal obstruction.

V.—CALCIFYING SARCOMA OF THE HUMERUS.

By Professor Muir.

This case was to be regarded as a pathological curiosity. The condition was rather rare, and he had not seen a similar one before. The tumour had started at the upper end of the humerus, whence it had spread downwards. It was as hard as ivory all through, except at extreme margin, where alone sections could be cut without decalcifying. It involved the whole circumference of the bone, and the medullary cavity was entirely filled up. It was questionable if the tumour were sarcomatous, but in favour of this view was the rapidity of growth (six weeks). Its appearance had been preceded by pain in the part. Amputation had been performed through the shoulder-joint, and the patient died from shock.

The microscope showed the case to have been one of spindle-celled sarcoma. There was an abundant matrix, which, in places, had undergone sudden calcification. The change was not gradual as in ossification. The calcareous materal was present in the form of masses of radiating spicules.

At the *post-mortem* secondary nodules were found in the ribs. These presented similar characters to the tumour in the humerus. The case is interesting as showing how a dense tumour may grow rapidly.

Mr. Maylard asked if a calcifying tumour showed dissemination as a rule.

Professor Muir replied that it was not likely, but that it had done so here. The secondary nodules were not quite so dense as the primary tumour.

VI.—CARD SPECIMENS.

By Professor Muir.

A. Three specimens of tubercular pericarditis:—

1. From a case of general tuberculosis. The exudation presented a markedly hæmorrhagic character, and the number of bacilli found on examination was enormous. Was there any association between these two facts?

2. From a case of chronic Bright's disease, with no evidence of tubercle elsewhere. The condition was one of subacute pericarditis. There were few bacilli, but tubercles were found.

3. Healed tubercular pericarditis. There was almost complete obliteration of the sac. The nature of the lesion was shown by the presence at one spot of caseous matter between the layers of the sac. There was extensive tuberculosis of the glands round about the aorta.

While not commonly affected in lung disease, the pericardium was in many cases infected from the lymph glands in the upper mediastinum.

B. Demonstration of microscopical preparations illustrating Weigert's method of staining elastic tissue fibres: (1) Artery in a kidney the seat of chronic Bright's disease; (2) pleura; (3) atheroma of pulmonary artery.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Session 1899-1900.

Meeting III.—2nd November, 1899.

The President, Dr. Hugh Kelly, *in the Chair.*

REMARKS ON TUBERCULOSIS.

By Dr. Hugh Kelly.

Dr. Kelly's paper appears as an original article at p. 402. In addition, Dr. Kelly read to the meeting a circular which he had just received from the Local Government Board in connection with the subject of tubercle in cows.

The new Order states that Article 15 of the Dairies, Cowsheds, and Milkshops Order of 1885 is amended in this Order of 1899, so that the expressions which refer to "disease" in the Contagious Diseases (Animals) Act, 1878, shall include, in the case of cows, such disease of the udder as shall be certified by a veterinary surgeon to be "tubercular."

The effect of this new Order will be to prevent the milk of a cow suffering from such a disease being sold or used for the food of man, or, unless previously boiled, for the food of swine or other animals.

On the motion of *Prof. T. M'Call Anderson*, a hearty vote of thanks was awarded to Dr. Kelly for his address.

MEETING IV.—16TH NOVEMBER, 1899.

The President, DR. HUGH KELLY, *in the Chair.*

ADDRESS ON PARACELSUS.

BY DR. JAMES FINLAYSON.

Dr. Finlayson gave an address on Paracelsus, illustrated by extracts from his writings, and by a small selection of Paracelsian literature.

In introducing his subject, Dr. Finlayson referred to the difficulties encountered by a student of the works of Paracelsus, owing partly to his love for florid language, and to the fact that he dictated to an amanuensis who wrote in the early German language. Treating of his fame as a physician, Dr. Finlayson showed that he was celebrated in three chief aspects. He revolted against authority, and, living as he did from 1493 till 1541, was a contemporary of Martin Luther. Just as Luther revolted against ecclesiastical authority, and publicly burned the bull of the pope, so Paracelsus revolted against medical authority, and publicly burned the books of Galen and Avicenna. The next great point of his career was then dwelt on, namely, his use of chemical remedies in the treatment of disease. He used a preparation of opium, and professed to have discovered "the elixir of life." Lastly, he is known to fame as a mystic, and, as a disciple of mysticism, professed to see deeper than ordinary sight could penetrate. He believed in the powers of imagination and of faith in healing diseases, and, in some respects, reminded us of the doctrines associated with the name of Emmanuel Swedenborg.

On the motion of the *President*, Dr. Finlayson received a cordial vote of thanks for his interesting address.

GLASGOW EASTERN MEDICAL SOCIETY.

Session 1899-1900.

Meeting III.—1st November, 1899.

The President, Dr. W. L. Muir, *in the Chair.*

NOTES OF OBSCURE CASES OF INVETERATE SICKNESS CURED OR RELIEVED BY UTERINE TREATMENT.

By Dr. Samuel Sloan.

Dr. Sloan, after commenting on the sympathy which exists between the pelvic organs of women and their digestive system, remarked that his object in bringing this subject before the Society was to direct attention to reflex sickness in uterine affections, which, though generally recognised in the sickness of pregnancy, was, he thought, less appreciated in gynæcological practice than it deserved to be. Five cases were enumerated in which inveterate sickness was the chief complaint, and associated with this in some cases was a greater or less amount of retching. Vomiting was always absent, unless perhaps just immediately after a meal; but neither careful regulation of the diet nor total abstinence from alcohol in the least affected this feeling of nausea. This sickness, further, might be absent in the morning—at least was never worst in the morning—and increased as the day wore on. All were cases of very slight endometritis, with an almost complete absence of local signs. In one case an acute anteflexion of the uterus, and in another a split cervix, was associated with the chronic inflammation of the endometrium.

In none of them could the sickness be said to be due either to purulent absorption from the uterine cavity or to ovarian disease.

Three of the cases were cured by curettage of the uterus, the anteflexion of one and the split cervix of another being attended to at the same time. Under several galvano-caustic applications to the endometrium, by currents varying in strength from 40 to 90 milliamperes, the sickness steadily diminished, and ultimately disappeared in one of the remaining cases, while in the other the same object was attained by application of iodine and carbolic acid to the endometrium and cervix.

Dr. Sloan pointed out how we are accustomed to regard as evidence of pelvic disease such symptoms as local pain, burning and bearing-down sensations, troubles of bladder and rectum, neuralgias of the hypogastric region or of legs, mild gastric disturbance and general ill-health, with disturbed menstruation and perhaps copious inter-menstrual discharge —all of which symptoms were awanting in his (Dr. Sloan's) cases.

Dr. Couper asked Dr. Sloan if he would not try milder measures, such as application of iodine and carbolic acid, to interior of the uterus before proceeding to the graver operation of curettage of the uterine cavity.

Dr. John Patrick advocated the use of belladonna pessaries in cases such as Dr. Sloan's.

Dr. Sloan replied that it was his invariable practice to try the effect of applying medicaments to the uterine cavity before advising a scraping operation. Belladonna pessaries were, he considered, useless. As opportunity occurred, he intended making further trial of electrisation of the sympathetic system in this class of case.

THE FORFARSHIRE MEDICAL ASSOCIATION.

An additional meeting of this Society was held in the University College, Dundee, on Wednesday, 1st November, 1899—Dr. Templeman, vice-president, in the chair.

Dr. Mackie Whyte gave notes of a case of a man, aged 39, who had had symptoms of cardiac failure, with angina, for thirteen months. He had signs of marked aortic regurgitation, with a slowly progressing dilatation of the heart, and latterly severe pain over the liver. The *post-mortem* showed fatty and dilated heart, without hypertrophy to any degree; atheromatous and dilated aorta; small coronary orifices; nutmeg liver; perihepatitis; perisplenitis; fatty kidneys. These specimens were shown to the meeting.

DR. M'GILLIVRAY read a paper on the treatment of tear-duct obstruction, and in it stated that he had almost entirely abandoned repeated probings, preferring the use of solid metal styles made of electric fuse wire. After dividing the lower canaliculus and the stenosed portion of the tear-duct by means of a specially constructed knife, a No. 6 Couper's bulbous probe is inserted, and then the style. When the style is properly inserted, the bent upper portion should lie in the divided canaliculus without causing inconvenience, and without being seen except on eversion of the eyelid. The style need not be removed for two or three months, by which time the cure is generally complete. The fuse wire is used on account of its toughness, cheapness, and pliability. The only further treatment necessary is the use of an alum and boracic lotion for bathing the eye, and the emptying of the sac by pressure over it with the finger. He has tested the treatment in about 200 cases with such gratifying results that he is not likely to return to the method of probing, which caused considerable pain and inconvenience to the patient.

Drs. Duncan and *Halley* spoke on the paper.

Dr. M'Gillivray replied.

DR. MACKIE WHYTE gave the results of treatment of tapeworm in six cases by internal administration of chloroform. The dose was usually one drachm. In several cases a deep sleep of an hour's duration or more came on a few minutes after the dose. The results were on the whole disappointing, and usually the oil of male fern had to be given ultimately. His results were compared with those recently published by Leichtenstein in *Die Therap. Gegenwart*, whose conclusions were entirely against the efficiency of chloroform.

Professor Marshall, in some remarks on the paper, expressed surprise that chloroform should ever have been used in the treatment of tapeworm.

Drs. Colman and *Halley* also spoke, and *Dr. Whyte* replied.

PROFESSOR STALKER read a paper on "Delayed Recovery in Pneumonia," prefacing his remarks by a case in which there was an apparent crisis about the eighth day; but the temperature again rose, and continued with nightly rises to the twenty-second day, without any apparent reason, such as pleural effusion. In his paper he compared the temperature chart in such cases with that in specific fevers, and sought to explain the prolongation of the fever in some cases of pneumonia by some septic infection of the pneumonic exudation, maintaining that these cases of delayed recovery were not simply cases of prolonged pneumonia.

Professor Marshall, *Drs. J. M. Whyte*, *M'Vicar*, *Bruce*, and the *Chairman* spoke on the paper.

Professor Stalker, in his reply on the discussion, said he thought the prevalence of pneumonia in Dundee was a striking fact, but the type was severer than formerly. He also stated that in none of his cases was there any tubercular tendency to explain the delayed recovery.

REVIEWS.

Cancer: Illustrated by One Thousand Cases from the Registers of the Middlesex Hospital, and by Fifty Selected Cases of Cancer of the Breast, &c. By THOMAS WILLIAM NUNN, F.R.C.S. London: Henry J. Glaisher. 1899.

THIS monograph on cancer is an amplification of Mr. Nunn's previously published essay on *Cancer of the Breast*.

More than half of the book is taken up with a description of fifty-three breast cases. Interesting facts and observations are given with each case, accompanied in some by an account of the *post-mortem* examination, showing the extent of the mischief, the organs involved, and the situation of the secondary deposits.

It would, however, have added greatly to the value of this collection if Mr. Nunn had given in each case an account of the histological examination. In two of the cases this is done, and forms part of a series of eleven micro-photographic plates; all are good, and illustrate various points in the text.

The structure of cancer, its life history, regional frequency, age liability, geographical distribution, and hereditary character are separately referred to and discussed.

A very good summary is given of the various opinions held as to the origin of cancer—"opinions which vary from the bio-pathological to the parasitic," thus:—"That the cancerous cells are affiliated to the normal secreting gland cell; that they are derived from the epithelial basement membrane, from the connective tissue corpuscles, from endothelium of the lymphatic vessels; that they owe their origin to a blastema filtering through the walls of the capillaries; that the stroma is the essential constituent of carcinoma, its chambers communicating with the lymphatic vessels, and hence the lesions of the lymphatic glands; that an inflammatory hypertrophy may become an infective growth; that cancer is the result of a constitutional fault; that it is a purely local disease, and is parasitic." Mr. Nunn finds it difficult to dissociate the phenomena of the disease from the idea of some constitutional fault.

The facts mentioned as a result of the examination of a thousand consecutive cases in the cancer wards of the Middlesex Hospital, as to regional frequency and to age, are most striking and instructive.

Dr. Nason's conclusions in regard to geographical distribution, influence of subsoil drainage, &c., are those generally held.

The subject is so extensive that it would require a much larger treatise to do it justice; the present volume is excellent so far as it goes.

Rough Notes on Remedies By WILLIAM MURRAY, M.D. Third Edition. London: H. K. Lewis. 1899.

THE third edition of this little book, the former editions of which we have already favourably noticed, calls for no special remarks. A few new chapters on "specific diseases," "ptyalism in jaundice," &c., have been added, but otherwise the plan of the book is unchanged.

Essentials of Diseases of the Ear. By F. B. GLEASON, S.B., M.D. Second Edition. London: Henry Kimpton. 1898.

THIS little book is arranged in the form of question and answer. The method has been carried out with a good deal of success. The questions serve as a convenient index of the contents, and are not too numerous.

The author writes in a lucid and interesting manner, which will commend itself to students, for whom the work is primarily intended. Some portions, such as the account of intratympanic operations, may be read with profit even by those practising ear diseases specially.

The section on diseases of the internal ear might with advantage have contained more details.

We can recommend the volume as a good introduction to otology.

The Medical Digest: or, Busy Practitioner's Vade Mecum. Appendix, including the Years 1891 to March, 1899. By RICHARD NEALE, M.D. Lond. London: John Bale, Sons & Danielsson, Limited.

WE have great pleasure in calling the attention of our readers to this Appendix to Neale's well-known *Medical Digest.* The features of the Appendix are unchanged, and the work is dedicated to Dr. J. S. Billings and Dr. T. Lauder Brunton.

The Diseases of Children, Medical and Surgical. By HENRY ASHBY, M.D. Lond., and G. A. WRIGHT, B.A., M.B. Oxon. Fourth Edition, thoroughly revised. London: Longmans, Green & Co. 1899.

FEW works have enjoyed a greater or better deserved popularity than Ashby and Wright's *Diseases of Children.* The fourth edition, within ten years of the first, is proof of its popularity. The whole work has been thoroughly revised; sixty pages have been added to the text; the present issue contains twenty-five new photographs and fourteen new plates. The chapter on anæsthetics has been rewritten by Mr. A. Wilson, F.R.C.S.

An Introduction to Diseases of the Nervous System. By H. CAMPBELL THOMSON, M.D., M.R.C.P. London: Baillière, Tindall & Cox. 1899.

THIS is a nicely got up, well printed, lucidly and accurately written work of 123 octavo pages. A brief account is given of the general structure of the nervous system, and of some of its principal conducting paths. Most of the book after this is taken up with the muscles and the paralyses in which they may be involved. The subjects of consideration in the later chapters are the reflexes, the localisation of lesions in the spinal cord, and disorders of gait. The scope of the work is strictly elementary, but what is done is well done. To students when they first come in contact with cases of nervous disease, this "Introduction" ought to prove both interesting and useful.

The Guide to South Africa, for the use of Tourists, Sportsmen, Invalids, and Settlers. Edited annually by A. Samler Brown and G. Gordon Brown. 1899-1900 Edition. London: Sampson Low, Marston & Co. 1899.

We have pleasure in very favourably recommending to the notice of our readers the present issue of this valuable guide to South Africa. At the present time South Africa is occupying the public mind in a fashion and to an extent that it never did before. Such a work as the present is likely to be of great interest to all who desire information on the ethnology and physical geography of the country.

The coloured maps prove a very useful addition to the volume, which we cordially recommend.

South African Health Resorts. London: Donald Currie & Co. 1899.

This is a smaller work than that just noticed, more definitely medical in its bearings, and should be consulted by all who are thinking of going to the Cape for health reasons.

Transactions of the Twentieth Annual Meeting of the American Laryngological Association, May 16-18, 1898. New York: Appleton. 1899.

This volume maintains the high standard reached by its predecessors. The papers are almost all concerned with treatment and diagnosis, and those interested in diseases of the throat and nose may glean from them many hints of practical value. A few contributions based on scientific research would be a welcome addition.

The following papers are specially attractive:—Early

Diagnosis of Whooping-cough (by bacteriological examination of the nasal secretions), by Dr. Wagner; Schleich's Mixtures for General Anæsthesia in Operations on the Nose and Throat, by Dr. Mayer; and the Local Use of the Aqueous Extract of the Suprarenal Glands of the Sheep in the Nose and Throat, by Dr. Swain.

A Dictionary of Terms used in Medicine and the Collateral Sciences. By the late RICHARD D. HOBLYN, M.A.Oxon. Thirteenth Edition, Revised throughout, with numerous additions, by JOHN A. P. PRICE, B.A., M.D.Oxon. London: Whittaker & Co. 1899.

THE changes in the present edition are mainly those of addition, and the editor is not without hope that the inclusion of words and phrases relating to bacteriology will make the work still more useful to the reader. Hoblyn's is a very useful medical dictionary, and will still maintain its place as a handy work of reference.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MATERIA MEDICA AND THERAPEUTICS.

BY R. BARCLAY NESS, M.A., M.B., C.M.

Treatment of Asthma by means of Atropine.—Belladonna is a remedy somewhat undeservedly out of fashion in the treatment of asthma. It was highly valued by Hyde Salter, and it, as well as its alkaloid atropine, was much used by Trousseau. Of late stramonium has, to a large extent, taken its place. The pharmacological effects of belladonna and stramonium are so similar that it is difficult to see why stramonium should be more effective than belladonna. Professor Carl v. Noorden has gone back to the old remedy, and reports very favourably on the treatment of asthma by means of atropine (*Therap. Monatsh.*, October, 1898). He begins with daily doses of ½ mg. internally, and increases the dose every second or third day by ½ mg., until the patient is taking 4 mg. a day, corresponding to 6 minims of liq. atropinæ B.P. After a time the doses are gradually diminished again. The duration of the treatment lasts, as a rule, from four to six weeks. Professor v. Noorden recommends a second and sometimes a third course of atropine treatment at an interval of six months, the duration and the dose being less than during the first course. He says the dose of 4 mg. a day is borne surprisingly well. With the exception of slight dryness in the throat and disturbance of accommodation, not the slightest ill effects have been produced.

The heart-rate remained normal. Professor v. Noorden advocates, however, that patients undergoing the atropine cure be kept under close supervision. It was noted that in two patients, who had eosinophile cells in large numbers in the blood, the number of these cells quickly diminished after the commencement of the atropine treatment, and subsequently did not increase again.—(Mackenzie, *Practitioner*, June, 1899.)

Treatment of Asthma by Paraldehyde.—Paraldehyde (*Merck's Archives*, July, 1899) is largely eliminated by the breath, and is a sedative, suggesting its use in *asthma* by Dr. Mackie, of Elgin; and now after a fair trial Dr. A. Macgregor (*New York Lancet*, 1899, p. 127), of London, says that no other drug in his hands has given such satisfactory results. He has found it absolutely safe, not only relieving the spasm, but inducing tranquil, refreshing sleep without any objectionable after-effects. As it gives rise to no drug habit, however much its use may be prolonged, it is far more desirable and safer than either morphine or chloral. The author recites his experience in treating eleven asthmatic patients, all being quickly cured, and in commenting on the use of paraldehyde says that the mere obtaining of sleep is of great importance for the asthmatic patient, the strength is saved, and what is lost during the day may be more or less regained. The prevention of the spasm is even a greater boon, seeing that each attack increases and prolongs the accompanying bronchitis. Potassium iodide and tincture of lobelia, as a rule, do much to relieve the bronchitis and to lessen the spasm, but their effect is immensely increased by securing sleep and the prevention of the nocturnal spasms by means of paraldehyde. The drug occasionally causes sickness, and for this reason it proved of no use in a severe case of long-standing bronchitis and emphysema. Its disagreeable pungent taste makes it objectionable to children and nervous patients, but it is well disguised in cinnamon-water and tincture of orange-peel. It acts, as a rule, so rapidly that the dose ought to be taken after the patient has gone to bed.

In one of his cases the paraldehyde acted so promptly that the patient, who was very nervous, became afraid of it, and would not continue its use. He thought it too good to be safe. A drachm should be used as a dose, and as the system does not acquire tolerance for the drug, the same quantity will answer as well after months of use as at the beginning. A very good way of administering paraldehyde is in expressed oil of almond. Equal parts of the oil and the paraldehyde, flavoured with essence of cinnamon, make a palatable dose. It can likewise be given in water, milk, beer, or wine, by using 1½ oz. or more of these vehicles for each dose of the paraldehyde.—(Wynter, *Treatment*, 14th September, 1899.)

A Case of Acute Poisoning by Iodine (*Wien. Klin. Wochenschr.*, No. 23, 1899).—At the third meeting of the Scientific Club of the Imperial and Royal Army Surgeons of the garrison of Vienna, Captain-Surgeon Dr. Karl Franz related the following interesting case of fatal iodine poisoning:—

A retired officer of the Austrian army, 70 years old, had ten years ago acquired an ulcus durum, which, after a period of two months, was followed by an ulcerative syphilitic skin eruption. This eruption was so persistent that 180 inunctions of blue ointment had to be made before it disappeared. During the following years the deceased had repeatedly taken large doses of iodide of potassium, which was well tolerated.

During the summer of 1898 a very acute bronchitis developed, malleolar œdema appeared, and under the symptoms of beginning cachexia, deceased was admitted to the hospital for officers (27th November, 1898).

On admission, deceased presented the usual symptoms of senile decay; contraction of the left, and sluggish reaction on accommodation of both pupils; lungs normal; slight hypertrophy of the heart; reduplication of first apical sound, and accentuation of second aortic sound.

The urine (specific gravity, 1013) contained a trace of albumen, a few hyaline casts, but no sugar.

The clinical diagnosis made was: Arterio-sclerosis, chronic interstitial nephritis, and hypertrophy of the left ventricle.

On 3rd and 4th December respectively, 15 grains of sodium iodide were given in water. On the morning of 6th December there was already pronounced iodism and iodine acne. The iodide was at once discontinued. In the afternoon of the same day there were extensive sub-conjunctival petechiæ, swelling of the mucous membrane of the nasal and faucial cavities, dyspnœa, swelling and tenderness of both testicles. The acne eruption had spread over the whole face.

On 7th December the nares began to ulcerate, the patient became very restless and unreasonable; the urine showed 13 per mille albumen, and in the sediment were numerous hyaline and granular casts; no iodine could be found in the urine.

On 10th December, extensive painful inflammatory infiltrations formed in the skin of the face and body; on the lower lip a phagedænic ulcer had formed, and the skin of the body and extremities was practically covered with small abscesses and vesicles containing turbid yellowish-green serum. The patient developed double hydrothorax, and died on 16th December, under the symptoms of pulmonary œdema.

At the *post-mortem* examination the following pathological changes were found:—Pemphigus of the skin and the mucous membrane of the œsophagus, chronic interstitial nephritis, hypertrophy and dilatation of the heart, serofibrinous pericarditis, double hydrothorax, œdema of the brain and lungs, chronic perisplenitis, and beginning cirrhosis of the liver.

[When the kidneys are healthy, almost all the iodine taken by the mouth is within a few hours eliminated in the urine in the shape of the sodium salt. There has never at any time during the last ten years existed in deceased an idiosyncrasy against iodine; even large doses, 60 to 90 grains per diem, were borne well. Considering that no iodine had been excreted by the kidneys—at anyrate, none was found when the urine was examined, which was done twice daily—the only explanation that can be given is that in consequence of the inability of the kidneys to eliminate the iodine, nearly all of the 45 grains of sodium iodide which deceased took in the hospital were retained, and have evidently proved a sufficiently large dose to produce acute iodine poisoning.

The fatal issue is due, in the first instance, to senile decay, and, in the second, to the multifarious lesions produced by the retention of iodine, which in itself is a consequence of the chronic nephritis from which deceased had suffered on admission to the hospital.

The lesson to be drawn from this case is, that the greatest caution should be observed in treating a cachetic old man suffering from chronic nephritis with even moderate doses of iodine salts; the administration of iodine salts should at once be discontinued if within six hours after the iodide has been taken the urine still shows no trace of iodine.—Ed.].—(Freyberger, *Treatment*, 13th July, 1899.)

Treatment of Syphilis by Iodine.—At the Congress für Innere Medezin, 1897, Blum showed that iodine formed with albumin a stable substitution compound. This was shown by the formation of an albuminous substance (iodo-albumin) in the thyroid gland after the administration of iodide of potassium. Zuelzer (*Archiv. für Derm. und Syphilis*, vols. xliii and xliv) repeated these experiments on dogs, and found that iodide organic compounds could be demonstrated in other parts of the body, but in much smaller quantities than in the thyroid gland.

Potassium iodide easily yields its iodine when acted on by oxidising agents; on the other hand, in the case of iodalbacid (a stable combination of iodine with a proteid nucleus, and containing 10 per cent of iodine) much stronger oxidising agents are necessary to liberate free iodine. The living animal body possesses a sufficiently strong oxidising power, however, for this purpose. This is shown by the quantitative excretion of iodine in the form of potassium iodide after administration of iodalbacid, which can only be effected by oxidation, and not by reduction. The relation between potassium iodide and iodalbacid is similar to that between pure glucose and starch; the latter never produces alimentary glycosuria, as it is only absorbed in proportion to its conversion into dextrose, no matter how great the dose. In the same way iodalbacid never produces so acute an excess of iodine, liberated in the tissues of the body, as potassium iodide. Iodalbacid is also practically not eliminated by the kidney, and hence during its sojourn in the body not only is its action (in liberating iodine in the tissues) slower and steadier, but its excretion from the system is slower. Hence its action is also more protracted. In numerous cases of syphilis and psoriasis, in which potassium iodide produced slight or grave symptoms of iodine poisoning, the administration of iodalbacid was found to be quite free from such effects. The largest part of doses of potassium iodide administered in tertiary syphilis passed through the body too readily to affect the morbid tissues, for example, gummata.

In all these respects iodalbacid is superior in its persistence. According to this view, potassium iodide is indicated in cases in which the first rapid action of iodine is desired, for example, in severe tertiary eruptions; but in all cases in which a protracted iodine treatment is desired, and where at the same time it was necessary that the total amount of iodine administered should be absorbed, and iodism, that is, free and extensive liberation of iodine in the tissues, avoided, iodalbacid should be prescribed. Fifty cases of syphilis were treated on these principles with iodalbacid, half of these being at the Dermatological Hospital and Poliklinik at Breslau, and the other half from the private practice of Professor Neisser; in every case good results were noted. Where there was any disposition to iodism, iodalbacid alone could be used. When the dangerous and destructive symptoms of the tertiary stage had disappeared, it was essential that the treatment should be kept up, and for this purpose iodalbacid met all requirements. Three to five grains of the substance in capsules were given daily.—(Marshall and Hudson, *Treatment*, 28th September, 1899.)

Iodipin.—The behaviour in the animal body of internally and subcutaneously administered iodised fat, the duration and nature of the secretion of iodine in the urine after the administration of iodised fat and the passage of iodised fats into the milk have been closely investigated by H. Winternitz (*Zeitschr. f. physiolog. Chemie*, 1898, vol. xxiv, p. 425), who has also succeeded in proving experimentally that it is possible by means of iodised fats to demonstrate the passage of nutrient fats into the elements of the tissues. These fats are found to be present almost everywhere, for even the kidneys, freed from natural fat, and the cardiac muscle contain these substances. Also when administered subcutaneously the presence of the iodised fats can be demonstrated in every organ or part of the body, especially in the bone-marrow, in the liver, in the mesenterial and kidney fat. The iodised fats introduced into the organism are split up so slowly that even weeks after the last administration of iodised fat iodine can be traced in the urine. Even the milk receives a considerable share of this fat, as shown by H. Winternitz by experiments on animals and by Bendix (*Deutsche med. Wochenschrift*, 1898, No. 14, p. 223) with respect to the human subject. These are most remarkable facts, both from a physiological and therapeutical point of view, especially since Bendix's experiments have shown that within five days 5·2 grm. (grs. 84) of iodine were taken up, without the slightest discomfort, in the form of iodised fats. The latter are therefore without doubt of great clinical interest, for they represent the only form (?) in which iodine, dissociated from alkaline bodies, can be introduced into the organism in very considerable quantities without giving rise to the symptoms of iodine poisoning.

As far as it is possible to judge from the experiments of several authorities, which will shortly be published, iodipin appears to be applicable to the treatment of all cases of primary, secondary, and tertiary lues and of hereditary syphilis. The specific properties of iodipin have manifested themselves in a particularly striking manner in the very gravest and most inveterate cases of tertiary lues complicated by destruction of the muscular system and the bones Even in such cases where baths, energetic inunction, and continued use of iodide of potassium had proved ineffective in bringing about the suppression of the syphilitic symptoms, and where the disorder was attended by pains in the joints and bones the desired effect was obtained through the use of iodipin, which did also good service in the subcutaneous treatment of syphilitic ulcers. Similarly, it has been applied with success for the internal treatment of keratitis scrophulosa and psoriasis syphilitica, as well as for the external treatment of scrophulous swellings of the glands. Its application has also proved very successful in the treatment of asthmatic disorders. The 10 per cent iodipin contains per tablespoonful or 15 grm. (fl. oz. ½) 1·5 grm. (grs. 24) of iodine, which corresponds to 1·96 grm. (grs. 31) of potassium iodide. One teaspoonful = 3·5 grm. (fl. dr. 1) contains therefore 0·35 grm. (grs. 6) of iodine, which is equivalent to 0·457 grm. (grs. 8) of potassium iodide. The daily dose of iodipin amounts to 1 to 3 teaspoonfuls at the utmost.

The disadvantage of the iodipin treatment consists in the fact that many patients object to the oily taste of the preparation. This objection may, however, in the majority of cases be disposed of by adding to each 100 grm. (fl. oz. 3) 3 to 4 drops of peppermint-oil, or mistura oleo-balsamica, or by directing it to be taken together with a little warm milk. The residual oily taste in the mouth can readily be removed by chewing a piece of dry bread immediately after taking the iodipin. For the treatment of a large number of patients in hospitals, iodipin may appropriately be prepared in the form of an emulsion, with the help of carrageen (Irish moss) and sugar, and flavoured with vanilla.—(*Merck*, Darmstadt, Annual Report, 1899.)

Books, Pamphlets, &c., Received.

Rough Notes on Remedies, by William Murray, M.D. F.R.C.P. Third Edition. London: H. K. Lewis. 1899. (3s. 6d.)

A Contribution to the Surgery of Fractures and Dislocations of the Upper Extremity, by J. E. Platt, M.S., F.R.C.S. Illustrated by 23 Drawings and Skiagrams. London: H. K. Lewis. 1899. (10s.)

A Laboratory Manual of Physiological Chemistry, by Elbert W. Rockwood, B.S., M.D. Illustrated with One Coloured Plate and Three Plates of Microscopic Preparations. Philadelphia: The F. Davis Co. 1899. (1 dol.)

The Diseases of Children, Medical and Surgical, by Henry Ashby, M.D. Lond., F.R.C.P., and G. A. Wright, B.A., M.B. Oxon., F.R.C.S. Eng. Fourth Edition, thoroughly Revised. London: Longmans, Green & Co. 1899. (25s.)

Mental Affections: An Introduction to the Study of Insanity, by John Macpherson, M.D., F.R.C.P.E. London: Macmillan & Co., Ltd. 1899. (12s. net.)

Catechism Series. Surgery. Part VII: Regional Surgery. Edinburgh: E. & S. Livingstone. (1s. net.)

The Medical Annual Synoptical Index to Remedies and Diseases, for the Twelve Years 1887 to 1898. Bristol: John Wright & Co. 1899. (7s. 6d.)

Appendix to the Medical Digest, including the Years 1891 to March 1899, by Richard Neale, M.D. London: John Bale, Sons & Danielsson, Ltd. 1899. (15s. 6d. net.)

A Manual of Surgical Treatment, by W. Watson Cheyne, M.B., F.R.C.S., F.R.S., and F. F. Burghard, M.D., and M.S. (Lond.), F.R.C.S. In Six Parts. Part II: The Treatment of the Surgical Affections of the Tissues, including the Skin and Subcutaneous Tissues, the Nails, the Lymphatic Vessels and Glands, the Fasciæ, Bursæ, Muscles, Tendons, and Tendon Sheaths, Nerves, Veins, and Arteries—Deformities. London: Longmans, Green & Co. 1899. (14s.)

Encyclopædia Medica, under the general Editorship of Chalmers Watson, M.B., M.R.C.P.E. Vol. II: Brachial Plexus to Digestion. Edinburgh: William Green & Sons. 1899.

The Diseases of the Nervous System: A Text-Book for Physicians and Students, by Dr. Ludwig Hirt. Translated, with permission of the Author, by August Hoch, M.D., assisted by Frank R. Smith, M.A., M.D. With an Introduction by William Osler, M.D. With 181 Illustrations. London: Henry Kimpton. 1899. (21s. net.)

Operative Surgery, by Joseph D. Bryant, M.D. Vol. I. With 749 Illustrations. Third Edition, Enlarged, thoroughly Revised and Rewritten. London: Henry Kimpton. 1900. (21s.)

Medicine, Old and New: An Introductory Address by W. Howship Dickinson, M.D. London: Longmans, Green & Co. 1899. (2s. 6d.)

Surgical Ward Work and Nursing: A Handbook for Nurses and Others, by Alexander Miles, M.D. With 333 Illustrations. London: The Scientific Press, Ltd. 1899. (3s. 6d.)

A Manual of Surgery, by Charles Stonham, F.R.C.S. Eng. In Three Vols. Vol. I: General Surgery. Vol. II: Injuries. London: Macmillan & Co., Ltd. 1899. (Each 7s. 6d. net.)

British Sanatoria for the Open-air Treatment of Tuberculosis. With numerous Illustrations. (Reprinted with Additions and Alterations from the "West London Medical Journal.") London: John Bale, Sons & Danielsson, Ltd. 1899. (1s. 6d. net.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FIVE WEEKS ENDING 25TH NOVEMBER, 1899.

	WEEK ENDING				
	Oct. 28.	Nov. 4.	Nov. 11.	Nov. 18.	Nov. 25.
Mean temperature, . .	48·2°	49·8°	47·4°	44·3°	48·8°
Mean range of temperature between day and night, .	15·7°	12·5°	12·3°	13·2°	8·6°
Number of days on which rain fell, ...	3	6	7	2	5
Amount of rainfall, . ins.	0·74	2·37	1·82	1·16	0·14
Deaths registered, . . .	287	284	252	279	290
Death-rates, ...	20·3	20·1	17·9	19·8	20·5
Zymotic death-rates, . .	2·2	3·0	1·7	2·8	2·8
Pulmonary death-rates, .	6·2	6·2	5·7	5·5	6·9
DEATHS—					
Under 1 year, . . .	67	62	70	67	80
60 years and upwards, .	46	50	50	49	62
DEATHS FROM—					
Small-pox, ...	...	...	...	...	...
Measles, ...	8	15	7	12	12
Scarlet fever, ...	3	7	2	7	6
Diphtheria, ...	2	3	3	5	6
Whooping-cough, . . .	1	1	1	3	4
Fever, ...	4	4	5	6	3
Diarrhœa, ...	13	13	7	7	8
Croup and laryngitis, .	1	2	1	1	2
Bronchitis, pneumonia, and pleurisy, ...	55	71	60	52	75
CASES REPORTED—					
Small-pox, ...	...	...	...	...	...
Diphtheria and membranous croup, ...	11	12	7	22	13
Erysipelas, ...	32	35	30	25	23
Scarlet fever, ...	132	135	117	116	130
Typhus fever, ...	...	...	...	...	...
Enteric fever, ...	28	43	27	24	16
Continued fever, . . .	...	1	...	...	...
Puerperal fever, . . .	...	1	1	3	1
Measles,*	175	268	190	303	252

* Measles is not notifiable.

SANITARY DEPARTMENT,
GLASGOW, *29th November, 1899.*

INDEX.

- ABSCESS, otitic extradural, operation for. T. Barr, 431.
- ABSTRACTS FROM CURRENT MEDICAL LITERATURE—
  - Diseases of children. J. Lindsay Steven, 294.
  - Diseases of the ear. J. W. Downie, 157.
  - Diseases of the eye. F. Fergus, 156.
  - Diseases of the throat. J. Macintyre, 154.
  - Gynæcology and obstetrics. E. H. L. Oliphant, 298.
  - Materia medica and therapeutics. R. B. Ness, 74, 448.
  - Medicine, 233.
  - Nervous diseases and insanity. R. S. Stewart, 72, 291.
  - Pathology and bacteriology, 293, 381.
  - Surgery. T. W. Jenkins, 152.
- Accouchement forcé, or Cæsarean section, 301.
- Adenoid growths, removal of, 154.
  - vegetations and follicular conjunctivitis, 157.
  - as cause of laryngeal spasm, 298.
- AIKMAN, J., and A. WEBSTER.—Notes upon a case in which psychical influence appeared to affect the development of organic disease in the presence of heredity and environment, 49.
- Alexander-Adams operation, 300.
- Alvarenga prize, 430.
- American army, enteric fever in, 233.
- Anæmia, pernicious, treated by arsenic and bone-marrow. T. M'Call Anderson, 195.
- Anderson's College appointments, 429.
- Aneurysm of aorta treated by hypodermic injection of gelatine, 74.
- Antero-posterior positions of the head as a cause of difficult labour, 301.
- Antrum, chronic empyema of, 155.
  - foreign bodies in, 156.
- Apocynum cannabinum: the "vegetable trocar," 76.
- Appendicitis. J. O'Conor, 182.
- Appendicitis, 154.
  - operation, abscesses in abdominal wall. D. N. Knox, 3.
- APPOINTMENTS, MEDICAL—
  - Anderson's College Medical School, 429.
  - Central Dispensary, 54.
  - Corporation bacteriologist, 279.
  - Maternity Hospital, 193.
  - Queen Margaret College, University of Glasgow, 279.
  - Royal Hospital for Sick Children, 193, 279, 429.
  - Royal Infirmary, 54, 129, 193, 337.
  - St. Andrews University: chair of pathology, 130.
- APPOINTMENTS, MEDICAL (*continued*)—
  - Victoria Infirmary, 129, 338.
  - Western Infirmary, 337.
- Army medical department, 194.
- Arthritis, tubercular, followed by insular sclerosis, 73.
- Aspirin, 130.
- Asthma treated by atropine, 448.
  - paraldehyde, 449.
- Atropine in treatment of asthma, 448.

- BACILLUS coli communis in puerperal septicæmia. J. M. M. Kerr, 174, 211.
- Bacteriologist to the Corporation, 54, 130, 194, 279.
- Bacteriology, post-graduate instruction, 193, 338.
- Battle of Santiago, otological experiences at, 157.
- Bellahouston Dispensary, 129.
- BLACK, M.—Three years' inductions of premature labour for contracted pelvis in the Glasgow Maternity Hospital, 81.
- Bladder, calculi removed by lithotomy in old subjects. J. H. Nicoll, 202.
  - extroversion of, 152.
- Blood-serum, germicidal properties of, 154.
- Book, a rare medical, and its author. H. E. Clark, 241.
- Books, &c., received, 78, 158, 238, 303, 383, 452.
- Brain, fœtal, injury of. R. Jardine, 215.
  - sarcoma of, 153.
- British pharmacopœia of 1898, 56.
- BUCHANAN, LESLIE.—Uncorrected errors of refraction and their results, 44.
- Bursitis, chronic, bilateral, prepatellar; operation. Arch. Young, 197.
  - popliteal, 153.

- CÆSAREAN section, or accouchement forcé, 301.
- Calculi, vesical; lithotomy. J. H. Nicoll, 202.
- Cancer, experimental production of, 298.
- Carcinoma cervicis; hysterectomy. Balfour Marshall, 204.
- Card specimens. R. Muir, 439.
- Carnigen, 431.
- Cataract, anterior polar, etiology and pathology, 156.
- Central Dispensary appointment, 54.
- Cerebellar tumour, knee-jerk in. C. O. Hawthorne, 161.
- Chloralbacid, 78.
- Cholecystotomy. D. N. Knox, 5.
- Chorea, chronic hereditary, histology of central nervous system in, 74.

CLARK, H. E.—A rare medical book and its author, 241.
  on the changes in surgical theory and treatment in the past twenty-five years, 305.
Clinical gynæcology. J. K. Kelly, 247, 322.
Club foot and club hand improved by operation. J. H. Nicoll, 200.
Clubs, medical, 428.
Cocaine in removal of thyroid. J. H. Nicoll, 203.
Cocaine poisoning, personal experience, 367.
Coghill, J. G. Sinclair, obituary notice, 53.
Congress, otological, seventh international, 430.
Conjunctiva, absorption of potassium iodide, 156.
Conjunctivitis, follicular, and adenoid vegetations, 157.
CORRESPONDENCE—
  Cremation, 278.
Cortical nerve-cells in eclampsia, 73.
Council, general medical, 56.
Craniotomy, 153.
Cremation, letter to editor, 278.
Cretinism, modified case of. R. Kirk, 133.
Cryptomenorrhœa in married women. B. Marshall, 207.
CURRENT TOPICS—
  Royal Infirmary appointments, 54, 129, 193, 337.
  Central Dispensary appointments, 54.
  Bacteriologist to the Corporation, 54, 130, 194, 279.
  Merryflatts Hospital extension, 55.
  University final examination, 55.
  Professorship of physiology in Edinburgh University, 56.
  General medical council, 56.
  The "British Pharmacopœia" of 1898, 56.
  Death of the "Index Medicus," 57.
  New drugs and preparations, 57.
  Phenalgin, 57.
  Vasogen, 57.
  Glasgow University Club of London—dinner to Sir Wm. Gairdner, 123.
  University of Glasgow—graduation ceremony, 126.
  Royal Colleges of Edinburgh and Faculty of Glasgow—July examinations, 128.
  Victoria Infirmary appointments, 129, 338.
  Victoria Infirmary: Bellahouston Dispensary, 129.
  Chair of pathology in St. Andrews University, 130.
  The William F. Jenks memorial prize, 130.
  New preparation: aspirin, 130.
  Glasgow health department, 186.
  Glasgow sanitary department, 190.
  Royal Hospital for Sick Children, 193, 279, 429.
  Glasgow Maternity Hospital, 193.
  Honour to Dr. J. B. Russell, 193.
  Opening of winter medical session, 193.
  University of Glasgow—practical bacteriology and pathological histology, 193.
  Army medical department, 194.
  Tannoform, 195.
  Queen Margaret College appointment, 279.
  Glasgow Medico-Chirurgical Society, 279.
  Glasgow Pathological and Clinical Society, 279.
  Glasgow Obstetrical and Gynæcological Society, 279.
  Southern Medical Society, 280, 338.

CURRENT TOPICS (*continued*)—
  Eastern Medical Society, 280.
  Glasgow University: death of bedellus, 280.
  Nursing chart, 280.
  Western Infirmary appointments, 337.
  Post-graduate instruction in bacteriology, 338.
  University of Glasgow—examination results, 339.
  "It's an ill wind that blaws guid tae naebody," 343.
  "Scots Nordrach Sanatorium," 426.
  Medical clubs, 428.
  Anderson's College Medical School appointments, 429.
  Glasgow University—graduation ceremony, 429.
  Royal College of Surgeons, Edinburgh, 430.
  Seventh international otological congress, 430.
  Alvarenga prize, 430.
  Carnigen, 431.

DEMONSTRATION of cases. D. N. Knox, 1, 57.
  fertilisation and segmentation in echinus. T. H. Bryce and J. H. Teacher, 345.
  William Hunter's obstetrical preparations. J. H. Teacher, 32, 210.
Diuretic action of apocynum cannabinum, 76.
Drugs, new, 57, 130, 195.
DUN, W. G.—Post-epileptic hemiplegia of short duration, 385.
Dystocia after vaginal fixation of uterus, 298.
  caused by antero-posterior positions, 301.

EASTERN MEDICAL SOCIETY: TRANSACTIONS OF—
  KNOX, D. N.—Demonstration of cases, 57.
  YOUNG, D.—Pathology of phthisis, 58.
  KNIGHT, J.—Staining sputum for tubercle bacillus, 59.
  OSWALD, L. R.—Cases of multiple neuritis with mental symptoms, 59.
  MUIR, W. L.—Retrospective, 365.
  HINSHELWOOD, J.—Holocaine in ophthalmic practice, 366.
  SERVICE, R.—Personal experience of cocaine poisoning, 367.
  M'KAIL, D.—On the use of eucaine, 368.
  SLOAN, S.—Obscure cases of inveterate sickness cured or relieved by uterine treatment, 441.
Echinus, fertilisation and segmentation in. T. H. Bryce and J. H. Teacher, 345.
Eclampsia, cortical nerve-cells in, 73.
Edinburgh University, chair of physiology, 56.
Empyema of antrum, chronic, 155.
Enemata, six cases of rash after. T. K. Monro, 165.
Enteric fever in American army, 233.
Epilepsy treated by trional, 73.
Eucaine. D. M'Kail, 368.
Examinations at University, 55.

FIBROID with uterus removed by Porro's operation. R. Jardine, 213.
Floors, disinfection by perchloride of mercury. E. L. Marsh, 268.
Fœtal skull, fracture of, with injury to brain. R. Jardine, 213.
Forceps, obstetric, accident with, 300.
Forfarshire Medical Association, 442.

GAIRDNER, SIR WM., dinner to, 123.
Gangrene after ligature of the femoral artery. D. N. Knox, 4.
Gastric catarrh, sodium sulphate in, 77.
  ulcer, operation for; perforation not found; drainage; recovery, 153.
  ulcer sutured for severe hæmatemesis. J. Lindsay Steven and J. Luke, 349.
Gastro-enterostomy for vomiting in gastric carcinoma. J. Lindsay Steven and J. Luke, 346.
Gastrorrhaphy for dilated stomach. A. E. Maylard, 131.
Gastrostomy for stricture of œsophagus. H. Rutherfurd, 359.
Gelatine as a hæmostatic, 75.
  in treatment of aneurysm, 74.
Genital tract maldeveloped in married women. B. Marshall, 207.
Glasgow Corporation Health Department, 186.
  Sanitary Department, 190.
  Eastern Medical Society, 280.
  Maternity Hospital, 193.
    three years' inductions of premature labour for contracted pelvis. M. Black, 81.
  Medico-Chirurgical Society, note on an early minute-book. G. S. Middleton, 333.
  meteorological and vital statistics, 80, 160, 240, 304, 384, 454.
  Pathological and Clinical Society, 279.
  Southern Medical Society, 280, 338.
  University Club of London, 123.
    death of bedellus, 280.
    graduation ceremony, 126, 429.
    pass lists, 339.
Goitre, exophthalmic, thyroid removed under cocaine. J. H. Nicoll, 203.
  injection of iodoformed ether for, 293.
Gynæcologica. T. W. Jenkins, 113.
Gynæcology, clinical. J. K. Kelly, 247, 322.
  one hundred and fifty years ago. J. K. Kelly, 103.

HÆMOSTASIS with gelatine, 75.
HAWTHORNE, C. O.—On the state of the knee-jerk in cases of cerebellar tumour, 161.
Heart, surgery of, 152.
Hemiplegia in tabes, 74.
  post-epileptic, of short duration. W. G. Dun, 385.
Heredity, environment and psychical influence as causes of organic disease. J. Aikman and A. Webster, 49.
Hernia, internal, with volvulus, successful operation for. G. R. Thomson, 119, 198.
Holocaine in ophthalmic practice. J. Hinshelwood, 366.
Hunter, William. J. H. Teacher, 15, 210.
Hysterectomy, cases of. J. K. Kelly, 324.
  by Doyen's method. B. Marshall, 204.
  vaginal, for cancer. W. L. Reid, 362.

"INDEX Medicus," death of, 57.
Inebriety, maternal, influence on offspring, 292.
Inguinal canal as approach to abdominal cavity in gynæcological operations, 299.
Insanity, recurrent. H. Kerr, 414.
Intestinal invagination in childhood, 295.
  obstruction, abdominal section for. T. Kay, 198.
Intestine, fatal hæmorrhage from. D. Fraser, 437.
  polyadenoma of, 152.
Intussusception cured without operation. D. N. Knox, 1.
Iodine in treatment of syphilis, 450.
  poisoning, acute, 449.
Iodipin, 451.
Iodoformed ether injected for exophthalmic goitre, 293.
"It's an ill wind that blaws guid tae naebody," 343.

JENKINS, T. W.—Gynæcologica, 113.

KELLY, H.—Remarks on tuberculosis, 402.
KELLY, J. K.—Cases of pregnancy admitted to the ward for diseases of women, 6.
  clinical gynæcology, 247, 322.
  gynæcology one hundred and fifty years ago, 103.
KERR, H.—Recurrent insanity: an analysis of relapsed cases, 414.
KERR, J. M. M.—The bacillus coli communis in puerperal septicæmia, 174.
Kerr, Norman, obituary notice, 53.
Kidney, sarcoma of, in child, 297.
Knee-jerk in cerebellar tumour. C. O. Hawthorne, 161.
Knee-jerks, loss of, in lesions of præfrontal region. R. T. Williamson, 335.
KNOX, D. N.—Demonstration of cases, 1.

LABOUR, missed. W. M'Farlane, 177, 211.
  premature inductions at Glasgow Maternity Hospital. M. Black, 81.
Larynx, spasm of, due to adenoid vegetations, 298.
Liantral, 77.
Lymphadenitis, scrofulous, 381.

M'FARLANE, W.—Missed labour, 177.
MacGill, Wm., obituary notice, 54.
MACLENNAN, ALEX.—On the position of the gravid uterus at the onset of labour with regard to lateroflexion and rotation, 31.
Mammary substance in gynæcology, 301.
MARSH, E. L.—On the value of perchloride of mercury as a disinfectant for floors, 268.
Massage of abdomen for deficient lacteal secretion, 300.
Masturbation, radical cure of. C. Clark and H. E. Clark, 197.
Medical clubs, 428.
MEDICO-CHIRURGICAL SOCIETY: TRANSACTIONS OF—
    ANDERSON, T. M'CALL.—Tuberculin treatment, 131.
    MAYLARD, A. E.—Case of gastrorrhaphy for dilated stomach, 131.
    KIRK, R.—Case of modified cretinism, 133.
    HINSHELWOOD, J.—Synchysis scintillans associated with syphilitic disease of the eyes, 134.
    ANDERSON, T. M'CALL.—Pernicious anæmia treated by arsenic and bone marrow, 195.
    CLARK, C., and CLARK, H. E.—Radical cure of masturbation, 197.
    MACINTYRE, J.—Demonstration in *x*-ray research, 197.
    YOUNG, ARCH.—Patient operated on for chronic bilateral prepatellar bursitis, 197.
      child successfully operated on for infective thrombosis of left sigmoid sinus following otitis media, 197.

- Medico-Chirurgical Society: Transactions of (*continued*)—
  - Thomson, G. R.—Intestinal obstruction—volvulus and internal hernia—successful operation, 198.
  - Kay, T.—Abdominal section for acute intestinal obstruction, 198.
  - Nicoll, J. H.—Cases operated on for spina bifida, 199.
    - cases where lesion was diagnosed as spina bifida, but was probably connected with neurenteric canal, 199.
    - double club foot with club hand benefited by operation, 200.
    - vesical calculi removed by lithotomy from prostatic patients aged 78, 80, and 85 years, 202.
    - case of exophthalmic goitre; thyroid excised under cocaine, 203.
  - Fergus, F.—Operative treatment of squint, 204.
  - Marshall, B.—Case of carcinoma cervicis: vaginal hysterectomy by Doyen's clamp method, 204.
    - two cases of maldevelopment of the genital tract in married women, 207.
  - Clark, H. E.—Changes in surgical theory and treatment in the past twenty-five years, 345.
  - Bryce, T. H., and Teacher, J. H.—Fertilisation and segmentation in echinus, 345.
  - Steven, J. Lindsay, and Luke, J.—Large malignant tumour of the pylorus; severe vomiting relieved by gastro-enterostomy, 346.
    - severe hæmatemesis from simple gastric ulcer; suture of ulcer, 349.
  - Steven, J. Lindsay.—Case of purulent pericarditis, 351.
    - case of purulent pericarditis; paracentesis pericardii, 353.
- Meningitis, epidemic cerebro-spinal, its bacteriology, 293.
- Meningocele, occipital, removal of. H. Rutherfurd, 361.
- Mental symptoms in multiple neuritis. L. R. Oswald, 59.
- Mercury, perchloride, as a disinfectant for floors. E. L. Marsh, 268.
- Merryflatts Hospital extension, 55.
- Mesenteric vein, superior, thrombosis of. D. Fraser, 437.
- Metatarsalgia, 153.
- Middleton, G. S.—A note on the minute-book of an early Glasgow Medico-Chirurgical Society, 333.
- Milk, defective secretion, treated by massage of abdomen, 300.
- Minute-book of early Glasgow Medico-Chirurgical Society. G. S. Middleton, 333.
- Missed labour. W. M'Farlane, 177, 211.
- Monro, T. K.—Six cases of rash after enemata, 165.
- Myelitis, transverse, with flaccid paraplegia, 73.

- Nævus, subcutaneous cavernous. A. A. Young, 436.
- Nasal insufficiency from undue prominence of cervical vertebræ, 155.
- Necrosis of pubes, vesical calculi, lithotomy. D. N. Knox, 4.
- Nephrolithiasis, x-rays in, 154.
- Nervous system, histology of, in chronic hereditary chorea, 74.
- Neurasthenia, treatment of. W. F. Somerville, 273.
- Neurenteric canal, lesion connected with. J. H. Nicoll, 199.
- Neuritis, multiple, with mental symptoms. L. R. Oswald, 59.
- New drugs, foods, &c., 431.
- Nicholson, Dr. W. T.—Obituary notice, 424.
- Nursing chart, 280.

- Obituary—
  - Dr. Norman Kerr, 53.
  - Dr. J. G. Sinclair Coghill, 53.
  - Dr. William MacGill, 54.
  - Dr. Wm. T. Nicholson, 424.
  - Dr. Hugh Rhodes, 425.
- Obstetrical and Gynæcological Society, 279.
- Obstetrical and Gynæcological Society—Transactions of—
  - Teacher, J. H.—William Hunter, anatomist: lecture with demonstration, 210.
  - Kerr, J. M. M.—Bacillus coli communis in puerperal septicæmia, 211.
  - M'Farlane, W.—Missed labour, 211.
  - Jardine, R.—Incomplete rupture of uterus, showing retraction ring, 211.
    - fibroid tumour and uterus removed by Porro's operation, 213.
    - fracture of fœtal skull, with injury to brain, 215.
- O'Conor, J.—Appendicitis, 182.
- Oculomotor centre, double cortical, 292.
- Œsophagus, valvular stricture with diverticulum; gastrostomy. H. Rutherfurd, 359.
- Otitis media chronica, operation for radical cure. T. Barr, 431.
- Otological experiences in naval battle, 157.
- Ovary, sarcoma of. A. Roxburgh, 387.

- Paracelsus. J. Finlayson, 440.
- Paraldehyde in treatment of asthma, 449.
- Paralysis, general, of insane, 291.
- Paraplegia, spastic, with organic lesion and without degeneration of pyramidal tract, 72.
- Parotid gland substance in gynæcology, 301.
- Pathological and Clinical Society—Transactions of—
  - Rutherfurd, H.—Valvular stricture of œsophagus with diverticulum; gastrostomy; death from persistent vomiting, 359.
    - patient from whom occipital meningocele was removed, 361.
  - Reid, W. L.—Vaginal hysterectomy for malignant disease, 362.
  - Barr, T.—Deaf-mute operated upon for otitic extradural abscess, and for radical cure of chronic otitis media (Stacke's operation), 431.
  - Barr, T., and Nicoll, J. H.—Purulent thrombosis of left lateral sinus, 432.
  - Young, Alf. A.—Subcutaneous cavernous nævus of temporal and palpebral regions, 436.
  - Fraser, D.—Omentum and bowel from case of fatal hæmorrhage from the bowels; thrombosis of superior mesenteric vein, 437.
  - Muir, R.—Calcifying sarcoma of humerus, 438.
    - card specimens, 439.
- Pelvis, contracted, cases at Glasgow Maternity Hospital. M. Black, 81.

Percussion of cranium, 72.
Pericarditis, purulent. J. L. Steven, 351, 353.
Pericardium, paracentesis of, for purulent pericarditis. J. L. Steven, 353.
Peritonitis, tubercular, cured by operation. D. N. Knox, 2.
Phenalgin, 57.
Phthisis, its pathology, past and present. D. Young, 58.
Potassium iodide, absorption through conjunctiva, 156.
Præfrontal region of brain, knee-jerks in lesions of. R. T. Williamson, 335.
Pregnancy, cases of, in gynæcological ward. J. K. Kelly, 6.
  vomiting of, 300.
Psychical influence affecting organic disease. J. Aikman and A. Webster, 49.
Puerperal infection, value of antistreptococcic serum, 302.
  septicæmia, bacillus coli in. J. M. M. Kerr, 174, 211.

Queen Margaret College appointment, 279.

Rash after enemata. T. K. Monro, 165.
Refraction, uncorrected errors. L. Buchanan, 44.
Relapsing insanity. H. Kerr, 414.
Retrospective. W. L. Muir, 365.
Reviews—
  Anderson, J. W.—Power of nature in disease, 289.
  Archives of neurology and psychopathology, 220.
  Ashby, H., and Wright, G. A.—Diseases of children, 446.
  Baldy, J. M.—Gynæcology, 140.
  Braithwaite, J., and Trevelyan, E. F.—Retrospect of medicine, 232.
  Bramwell, B.—Anæmia and diseases of blood-forming organs, 228.
  Brockbank, E. M.—Murmurs of mitral disease, 375.
  Brown, A. M.—Alkaloidal ætiology, 149.
  Brown, A. S., and Brown, G. G.—Guide to South Africa, 447.
  Browne, Lennox.—Throat and nose, 150.
  Bruce, J. Mitchell.—Materia medica and therapeutics, 67.
  Cathcart, C. W.—Catalogue of museum of Royal College of Surgeons of Edinburgh, 71.
  Caton, R.—Temples and ritual of Asklepios at Epidaurus and Athens, 290.
  Cheyne, W. W. — Surgical treatment, 282.
  Donders, F. C., and Oliver, C. A.—Anomalies of refraction, 226.
  Douglas, C. C. — Chemical and microscopical aids to clinical diagnosis, 135.
  Edinger, L., and Hall, W. S.—Anatomy of central nervous system, 145.
  Elder, G., and Fowler, J. S.—Diseases of children, 151.
  Féré, C., and Park, R.—Pathology of emotions, 372.
  Gibson, G. A.—Edinburgh Medical Journal, new series, vol. v, 232.
  Giffen, G. H.—Materia medica, 68.
  Gleason, F. B.—Diseases of the ear, 445.
  Gould, G. M.—American year-book of medicine and surgery, 72.

Reviews (*continued*)—
  Halliburton, W. D.—Chemical physiology, 69.
  Hare, H. A.—Medical complications of enteric fever, 378.
  Harrison, R.—Stone, prostate, and other urinary disorders, 285.
  Hawthorne, C. O.—Mental discipline in study of medicine, 380.
  Hewer, Mrs. L.—Our baby, 291.
  Hill, L.—Physiology, 141.
  Hoblyn, R. D. and Price, J. A. P.—Dictionary of medical terms, 448.
  Jewett, C.—Obstetrics, 138.
  Kelynack, T. N. — Pathologist's handbook, 380.
  King's College Hospital reports, 230.
  Kingscote, E.—Asthma 283.
  Lockwood, C. B.—Aseptic surgery, 150.
  M'Caw, J.—Diseases of children, 151.
  M'Kendrick, J. G. — Physiological perception of musical tone, 215.
  M'Keown, W.—Unripe cataract, 225.
  Mackintosh, D. J.—Skiagraphic atlas of fractures and dislocations, 281.
  Moore, B.—Physiology, 142.
  Morison, A.—Relation of nervous system to visceral disease, 377.
  Moullin, C. M.—Enlargement of the prostate, 222.
  Muir, R., and Ritchie, J.—Bacteriology, 66.
  Murray, W.—Notes on remedies, 445.
  Neale, R.—Medical digest, 446.
  Nunn, T. W.—Cancer, 444.
  Nurse's clinical case-book, 70.
  Ohlemann, M., and Oliver, C. A.—Ocular therapeutics, 224.
  Polyclinic, vol. i, No. 1, 70.
  Rieder, H.; Moore, F. C.; and Delépine, A. S.—Atlas of urinary sediments, 229.
  Savill, T. D.—Neurasthenia, 63.
  South African health resorts, 447.
  Spencer, D. B.—Indian fevers, 147.
  Stengel, A.—Pathology, 223.
  Stewart, I., and Cuff, H. E.—Nursing, 379.
  Stimson, L. A.—Fractures and dislocations, 61.
  Taylor, J. W.—Extra-uterine pregnancy, 136.
  Thomson, H. C.—Diseases of the nervous system, 446.
  Thompson, Sir H.—Modern cremation, 227.
  Thomson, St. Clair.—Cerebro-spinal fluid: its spontaneous escape from the nose, 288.
  Tirard, N.—Albuminuria and Bright's disease, 65.
  Transactions of American Laryngological Association, 447.
  Treves, F.—Intestinal obstruction, 368.
  Tuchmann, M.—Exploration of urethra and bladder, 144.
  v. Valzah, W., and Nisbet, J. D.—Diseases of the stomach, 69.
  Verworn, M.—General physiology, 216.
  Watson, C.—Encyclopædia medica, 286.
  Wright, D.—Treatment of hæmorrhoids and rectal prolapse, 148.
  Year-book of the scientific and learned societies, 71.
  Year-book of treatment for 1899, 231.
Rhodes, Dr. Hugh, obituary notice, 425.
Royal College of Surgeons, Edinburgh, 430.

Royal Hospital for Sick Children, 193, 279, 429.
Royal Infirmary appointments, 54, 129, 193, 337.
Royal Infirmary, post-graduate instruction in bacteriology, 338.
Roxburgh, A.—Sarcoma ovarii, 387.
Russell, Dr. J. B., 193.

Sanatorium, "Scots Nordrach," 426.
Sarcoma of brain, 153.
  humerus, calcifying. R. Muir, 433.
  kidney in childhood, 297.
  ovarii. A. Roxburgh, 387.
Sclerosis, insular, consecutive to tubercular arthritis, 73.
"Scots Nordrach Sanatorium," 426.
Scrofulous lymphadenitis, 381.
Septicæmia, puerperal, and bacillus coli. J. M. M. Kerr, 174, 211.
Serum, antistreptococcic, in puerperal infection, 302.
  germicidal properties of, 154.
Session, opening of, at Glasgow Medical Schools, 193.
Sickness, inveterate, cured by uterine treatment. S. Sloan, 441.
Sigmoid sinus, infective thrombosis; successful operation. A. Young, 197, 256.
Sinus, lateral, purulent thrombosis of. T. Barr and J. H. Nicoll, 432.
Sodium sulphate in gastric catarrh, 77.
Somerville, W. F.—The treatment of neurasthenia, 273.
Southern Medical Society: Transactions of—
    Kelly, H.—Remarks on tuberculosis, 439.
    Finlayson, J.—Paracelsus, 440.
Spina bifida, cases of.—J. H. Nicoll, 199.
Squint, operative treatment of. F. Fergus, 204.
St. Andrews University, chair of pathology, 130.
Stomach, cancer of; vomiting relieved by gastroenterostomy. J. Lindsay Steven and J. Luke, 346.
Suicide, increase of, 291.
Surgical theory and treatment, changes in past twenty-five years. H. E. Clark, 305, 345.
Synchysis scintillans with syphilitic disease of eyes. J. Hinshelwood, 184.
Syphilis in children, 295.
  treated by iodine, 450.

Tabes and hemiplegia, 74.
Tannoform, 195.
Teacher, J. H.—William Hunter, anatomist: a lecture with demonstration of preparations from the obstetrical series of the Hunterian Museum, 15.
Thomson, G. R.—Case of intestinal obstruction—volvulus and internal hernia—successfully operated on, 119.
Thrombosis, infective, of sigmoid sinus. Arch. Young, 256.
Thyroid tablets, action of, 295.
Thyroidin in treatment of physically and mentally ill-developed children, 294.
Toxicity of normal urine, 382.
Trional in epilepsy, 73.
Triple qualification, July examinations, 128.
Tubercle bacillus, staining of sputum for. J. Knight, 59.
Tuberculin treatment. T. M'Call Anderson, 131.
Tuberculosis, remarks on. H. Kelly, 402, 439.

Ulcer, gastric, 153.
University of Glasgow, graduation ceremony, 126, 420.
  instruction in bacteriology, 193.
Urine, normal, toxicity of, 382.
Uterus, gravid, position at onset of labour. A. Maclennan, 34.
  incomplete rupture of. R. Jardine, 211.
  with fibroid removed by Porro's operation. R. Jardine, 213.

Vagina, uterus, and adnexa, partial absence of, in married women. B. Marshall, 207.
Vasogen, 57.
Victoria Infirmary appointments, 129, 338.
  Bellahouston dispensary, 129.
Volvulus and internal hernia, successful operation for. G. R. Thomson, 119, 198.
Vomiting of pregnancy, 300.

Western Infirmary appointments, 337.
William F. Jenks memorial prize, 130.
Williamson, R. T.—On loss of the knee-jerks in gross lesions of the præfrontal region of the brain, 335.

X-ray demonstration. J. Macintyre, 197.
X-rays in nephrolithiasis, 154.

Young, Arch.—Remarks upon the operative treatment of infective thrombosis of the sigmoid sinus following chronic purulent otitis media: record of a case successfully treated, 256.

287435

GLASGOW: PRINTED BY ALEX. MACDOUGALL.

FOR REFERENCE

NOT TO BE TAKEN FROM THE ROOM

CAT. NO. 23 012

PRINTED IN U.S.A.